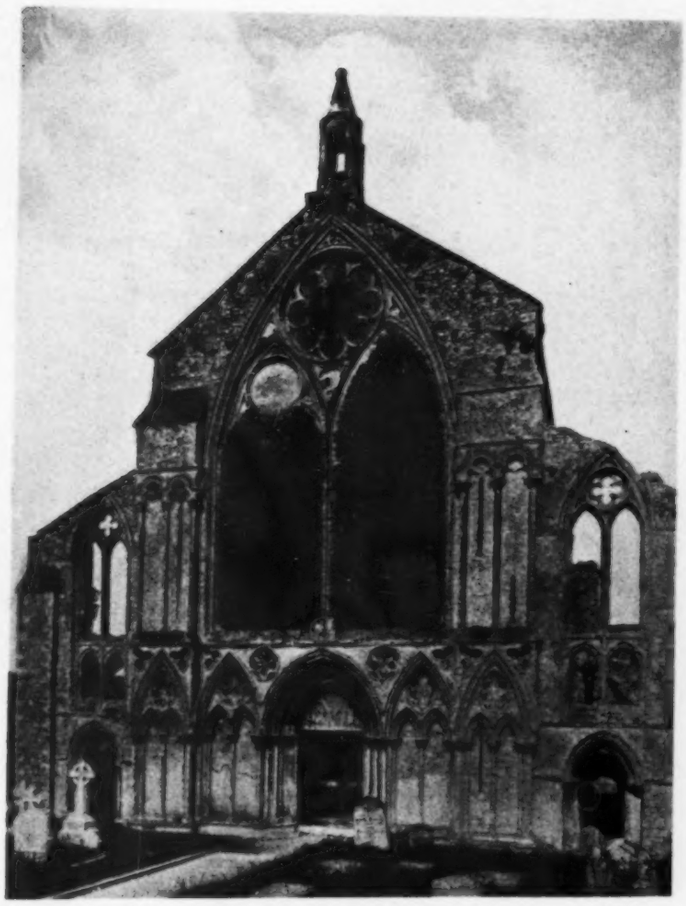
THE BUILDER
A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXXXVIII. JUNE 27, 1930. No. 4560.



Binham Priory: West Front.

MEETINGS

FRIDAY, *June* 27.

London Society. Visit to the Deaf and Dumb Asylum, 179, Lower Clapton-road, E. 2.45 p.m.

MONDAY-FRIDAY, *June* 30-*July* 4.

Institution of Mechanical Engineers. Summer Meeting. At Bristol.

TUESDAY-SATURDAY, *July* 1-5.

Institute of Quarrying. Twelfth Annual Conference. At the Grand Hotel, Scarborough.

THURSDAY, *July* 3.

National Housing and Town Planning Council. Annual Conference. At the City Hall, Cardiff.

FRIDAY-SUNDAY, *July* 4-6.

South Eastern Society of Architects. Visit to Southampton.

WEDNESDAY-FRIDAY, *July* 9-11.

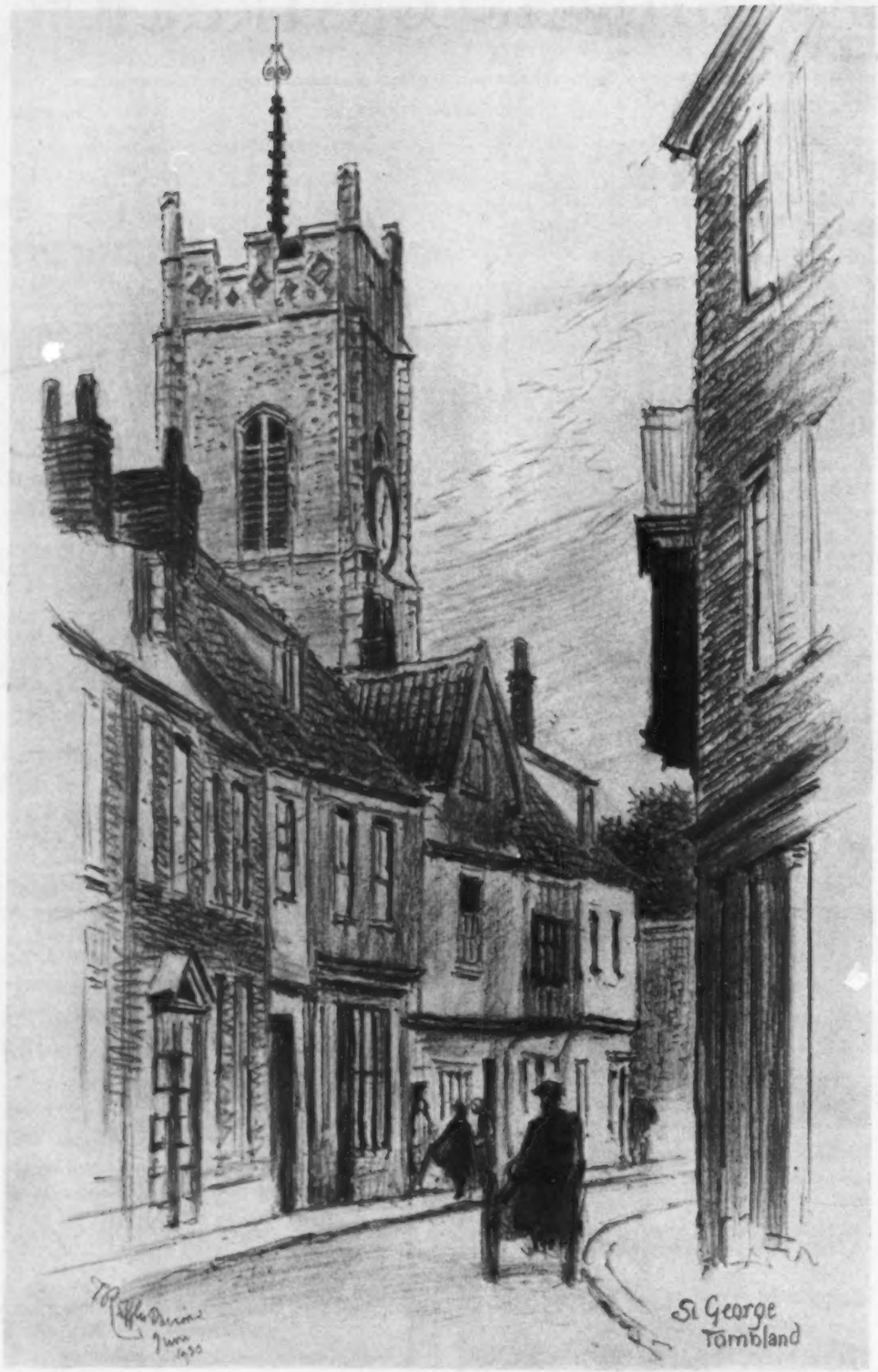
Auctioneers' and Estate Agents' Institute. Annual Provincial Meeting. At the Hotel Metropole, Brighton.

FRIDAY, *July* 11.

London Society. Annual River Trip: to West India Docks. 2.45 p.m.

SATURDAY, *July* 26.

South Eastern Society of Architects. Visit to Leeds Castle, Chilham or Bodiam.



St. George, Tombland, Norwich.
From a sketch by Mr. T. Raffles Davison, F.S.A.

NORWICH AND THE CONFERENCE

IT is always interesting to note the response to the annual Conference of British Architects, for several reasons, of which perhaps the most important is that it is an indication of the state of the profession and thus of the prosperity or adversity of various parts of England and the Dominions.

This year's Conference was an illustration of this fact and a commentary on the serious industrial depression in the Midlands and the North. It was also noticeable for the presence of many delegates from overseas and for the fact that these members of the allied societies, in their contribution to the debate, emphasised two facts of the many-sided activities of the R.I.B.A. which are sometimes overlooked by its own home members.

First they referred to their loyalty to the parent body. The advantages of loyalty are sometimes overlooked nearer home and it may, therefore, be an opportune moment to refer to them; it is always so easy to criticise—to pick out the things which are left undone and take for granted the things which are accomplished—and there is a tendency to assume that the central administrative body is entirely engaged in affairs which promote the interests of metropolitan members. The remarks of our colleagues from distant Dominions are, therefore, doubly welcome, because they are sincere expressions of good will, and timely reminders of the scope of the work of the R.I.B.A.

It is evidently illogical to contribute to the funds of any society by annual subscriptions, unless at the same time we hope to get some return for the money thus expended. And, if a little consideration is given to the matter, it is apparent that the only object of being a member of a body such as the R.I.B.A. is because corporate and collective action is more effective than individual effort. But to obtain the maximum result from such collective action, two things are necessary: loyalty and discipline. Thus, and we believe thus only, can public opinion be influenced (to the ultimate good of the profession) to an increased interest in fine architecture and by the attention which will be devoted by the Press and the public to the aims and objects of architects collectively and authoritatively put forward by the R.I.B.A. We do not intend by this to suggest to our readers that the policy and propaganda of the R.I.B.A. must always be divinely inspired or that legitimate and constructive criticism should be suppressed. But we do suggest that more loyalty might promote the interests of architects and, incidentally, tend to accelerate action by the Council of the R.I.B.A. in some directions where this is eminently desirable.

The other point which was brought out by the Overseas members was the value of these conferences as a meeting place where informal discussions can take place in a holiday atmosphere of cordial comradeship, where ideas can be exchanged, the latest constructional problems discussed and new points of view developed which may be of considerable importance in shaping the trend of modern architecture, not only in our own little island, but in the much vaster territories of Canada, of Australia and the other Dominions and Colonies which form the British Empire. This aspect of the conference is sometimes overlooked because, to those who meet there, the thing is so obvious; it is, we think, a sufficient answer to those critics who ask "What is the good of these conferences?" In fact, and rather paradoxically, the most useful work of the conference (as far as the architects are concerned) is achieved outside the conference room. But there is another aspect—and that is the effect of the meeting on local public opinion, and it is here that the conference room, the papers, and the formal discussion have their importance. Much of the increased public interest in town planning and civic architecture can be traced to the meetings, held in various provincial centres, by the Town Planning Institute and the R.I.B.A.

The selection of Norwich as a meeting place, with such an excellent paper as Mr. Harding-Thompson's concise exposition of town planning, was a happy inspiration, and will certainly have the desired effect of arousing public interest, more especially as it is put forward by architects, just as pleas for good architecture by town planning experts are more convincing to the average man than if the architect makes them. Norfolk is a county as yet untouched by any considerable industrial development and its roads are still adequate to the needs of the community. It is as delightful a county as can be found in England's pleasant land, and its inhabitants preserve those distinctive English characteristics of sturdy independence, ready wit, and dislike of strange customs and innovations, which last has tended, of course, to prejudice town planning schemes in this area.

Once again we see the need for some better term to express what is often exactly the reverse of "town planning;" for it has been well said that the ideal which should be ever present in the mind of the artist who seeks to divine and direct future development, is that of working on a background free from building, and to think of his scheme as a pattern on this background, implying that the skilful artist will limit his built-up areas to certain defined shapes on a clear background of agricultural land. This is as far removed from the popular idea of a town's growth or, indeed, any building development, as can well be imagined, and the cautious folk of this eastern county can hardly be blamed if they have regarded "town planning" with suspicion. But Norfolk, as a county, is now at an interesting and critical period when the timely adoption of a properly thought-out and well-ordered Regional Plan is of vital importance, more to preserve the charm and beauty of its varied and singularly attractive countryside than to promote any building developments. As Mr. Harding-Thompson pointed out in his paper, Norfolk lives mainly through the fertility of its soil, and every acre that is taken for building lessens its productive capacity.

The proposals which resulted from the conference can be briefly summarised as, first, the preparation of a regional survey for the whole county; secondly, the constitution of a Joint Regional Planning Committee (under the 1925 Act), either for the whole area of the county or for three convenient subdivisions or areas; thirdly, the institution of a system of advisory panels of architects whose function it would be to advise builders and building owners at an early stage, acting in conjunction with some form of control of elevations.

There is reason to think that such ideas would be sympathetically received, as during our tour of Norwich we saw a street which contains many picturesque old houses—not all of great architectural interest—which had been purchased for demolition by the local authority. Before this destruction took place representations were made by the local society of architects and it was agreed that one of the threatened buildings should be reconditioned before a final decision was arrived at; the experiment proved so successful that the whole of the old buildings acquired in Elm-hill, including the original home of the Paston family, are now restored and form a delightful group of picturesque buildings. The Paston house is now used as the Strangers' Club, and during a visit here the appreciation of the conference was expressed for the happy result of this co-operation between architects and municipal authorities.

NOTES

St. Paul's Cathedral.

The whole country must feel a profound satisfaction in the reopening of St. Paul's Cathedral by the King on Wednesday, with a sincere hope and belief that the reparation work which has been going on for some fifteen years has now ensured the safety of our great cathedral church. The public has made an adequate and generous response in providing the necessary funds, and the capacity of all concerned in the direction and carrying out of the work has earned the gratitude of us all. It will now be the duty of the City authorities to safeguard the great building from any risks to its stability from any of the activities of modern commercial enterprise. Something of what is involved in the design and construction of a great building like St. Paul's may have been gathered from the fine models and illustrations which are on exhibition at the Institute galleries, and the ingenuity and skill involved in the reception of the great weight of the dome and its safe transmission to the ground has been very fully explained by the elaborate details laid before us.

The Influence of the Press.

It is a tribute to the influence of the Press that the *Times* opened a subscription list for the St. Paul's preservation work which reached a splendid total and added immensely to the efficiency of the whole undertaking. In its issue of Wednesday are admirable illustrations of St. Paul's and other English and Colonial cathedrals, which is a fitting conclusion of its work on behalf of the Cathedral. The architectural profession is always able to count on the *Times* for a generous notice and appreciation of its work.

The Restoration of the Cathedral.

The exhibition of models, drawings, etc., of St. Paul's Cathedral, now on view at the R.I.B.A., shows very clearly the complexity of the problem that faced the conservers of the building and the skilful manner in which it has been dealt with. The isometric sections (which include the great drawing by Messrs. Brook-Greaves and W. Godfrey Allen) show graphically that, apart from defects of structural design in the dome area, a difficult problem was presented by the mediæval nature of the building method adopted, *i.e.*, the thin facing of ashlar for walls, piers, etc., with a rubble infilling. In the dome area especially we have a highly complex structural organism exerting an immense variety of conflicting forces, the difficulties of dealing with which must have been enormously increased by the "loose" nature of the building method employed. The chief danger was the possibility of the collapse of the dome, and the principal aim, therefore, has been to make the whole of the dome area, in a sense, monolithic, so that in the event of future settlement the central mass will move as a whole. The stabilising methods which have been adopted are clearly set forth in Mr. Allen's paper (page 1213). It may be here remarked that the fears which were expressed in some quarters that the grout injected into the piers would not coalesce with the rubble filling have been found entirely groundless; specimens of core taken after cementation are on exhibition, and show that the interiors of the piers are now quite solid.

How the Load is Taken.

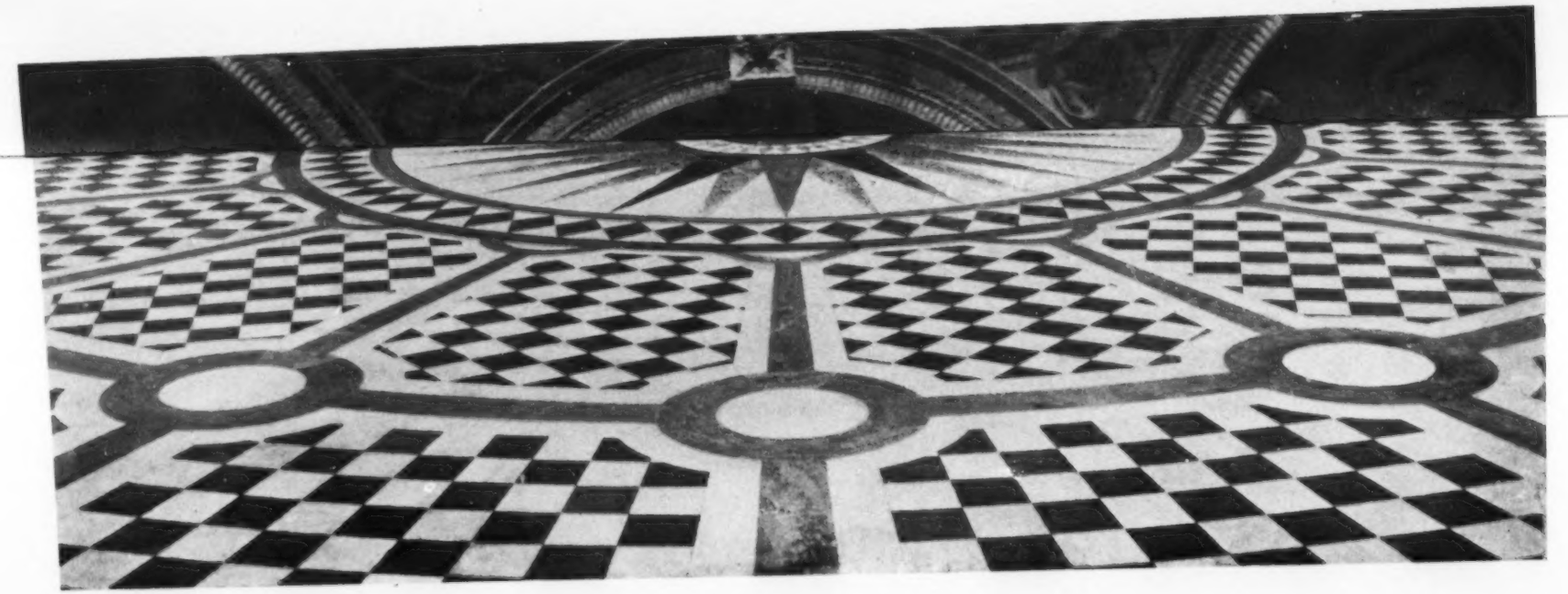
Perhaps the most interesting model on view is the smaller section through the dome area, which definitely clears up the point as to how the weight of the dome is transmitted to the piers and bastions. The fronts of the piers, owing to the separation of the inner and outer drums of the dome, are obviously overloaded, but the model clearly shows the box girder construction which plays an important part in spreading the enormous weight of the dome over piers and bastions.

Some of the Exhibits.

Among a variety of exhibits may be mentioned a half full-size model of Wren's chain inserted in the attic wall at the springing of the dome, which affords an interesting comparison with the chains which have been put in place during the present operations. At different times attempts have been made to strengthen the structure with iron bands, bars and chains, but the corroding of the metal has been responsible for much splitting of the masonry. Thus, stainless steel has been everywhere substituted for iron. The exhibition includes, besides the models, isometric drawings and other features already referred to, general plans, sections and elevations of different parts of the Cathedral, as well as photographs of the work in course of execution and completed. There are two volumes of especially interesting photographs, including a series showing how the whole space beneath the dome and between the piers was occupied by steel scaffolding and shoring to support the timber strutting carrying the enormous weight of the dome during the progress of the work. That these hazardous operations were successfully carried through

St. Paul's Cathedral: Iron Cramps in Main Pilaster Capital above one of Piers.

(*See page* 1213.)



St. Paul's Cathedral Restored : The Dome Area

St. Paul's Cathedral Restored : The Dome Area

St. Paul's Cathedral Restored : The North-East Piers and Bastion

without accident says much for the technical knowledge and ability of the architects and engineers and for the executive skill of the men engaged on the work.

R.I.B.A. Conference. All those who took part in the R.I.B.A. conference at Norwich must have felt well repaid for the three days spent there. Not only for the great architectural interest of the fine old city, the generous and kindly hospitality of the Lord Mayor and City authorities, but also for the opportunity of social and friendly intercourse with their fellow professionals. The architects who went must have derived exceptional enjoyment from their visit to Norwich. One cannot imagine a visit to any of our interesting old English cities which would afford a better realisation of the charms of old English architecture. The fine cathedral, which has a beauty of exterior and an interior which is one of the most impressive our cathedrals can show, the numerous old churches, the charming country scenes included in the expeditions, and such perfect examples of Gothic architecture as the fine Binham Priory and the West doorway of Blakeney Church, may be remembered as amongst the more distinguished features of a prodigal banquet which feasted the appetite for beauty which we all possess in varying degree and kind. The only regret which could be felt was that the fare provided was too rich and varied to be adequately digested in the time.

The Attendance. We confess to a feeling of some surprise and regret that the profession was so inadequately represented, not only by members of the Council, but by well-known architects from Bristol, Birmingham, Manchester, Liverpool and Leeds. We feel sure that had the possibilities of pleasure in this visit to Norwich been realised we should have seen a far better and more representative attendance.

Derbyshire Enterprise. A wave of enterprise appears to be passing over Derbyshire just now. There is something quaint about the old Market Square and centre of the town of Derby. The news comes as somewhat of a surprise, therefore, to hear that at a private sitting of the Corporation, details of a scheme to cost nearly £1,000,000 for new municipal buildings—including a Town Hall—were considered, and in spite of strong Conservative opposition the layout was approved. At the next public meeting of the council the scheme will come up for ratification. The news is also to hand that 600 houses, costing a minimum of £1,000 each, are to be built on Allestree Park, Derby, part of which has been laid out as a golf course. The Belper Rural Council have applied for a loan of £3,500 for providing a sewerage scheme for this development. In Derby itself the housing shortage is still acute; there is a waiting list of 4,000. The Corporation have built about 4,500 houses during the past ten years.

The R.I.B.A. London Architecture Medal, 1929. The Jury entrusted by the R.I.B.A. with the award of the London Architecture Medal for 1929, have, after careful examination of drawings and photographs of all the buildings which were nominated for the honour, given their award in favour of the Underground Electric Railway Company's premises, Broadway, Westminster, designed by Messrs. Adams, Holden & Pearson, FF.R.I.B.A. The R.I.B.A. London Architecture Medal is awarded annually to the architect who has designed a building of merit completed within the County of London during the three years ending December 31, 1929. The Underground Building is an interesting example of modern architectural development, and is especially notable for the efficiency of its plan.

Broadway House, Westminster.

Messrs. Adams, Holden and Pearson, FF.R.I.B.A., Architects.

(Awarded the R.I.B.A. London Architecture Medal.)

GENERAL NEWS

Professional Announcement.

Mr. G. S. Tungate, chief quantity surveyor to the Hampshire County Council since 1907, has opened practice at 9, Arthur-road, Erdington, Birmingham. Catalogues are invited.

Reconstruction of Moot Hall, Newcastle.

The Ministry of Health have approved a scheme submitted by Northumberland County Council for reconstruction of Moot Hall at an estimated cost of £90,000.

Exhibition of Ur Discoveries.

The annual exhibition at the British Museum of objects from the expedition to Ur will be opened to the public on Wednesday, July 2.

Rebuilding of SS. Peter and Paul, Fareham.

The Parochial Church Council of the SS. Peter and Paul, has given instructions to Sir Charles Nicholson, the architect, to invite tenders for the rebuilding of the church.

Mr. W. J. Locke's Estate.

Mr. William John Locke, of Les Arcades, Cannes, France, late of Corner Hall, Hemel Hempstead, Herts, the well-known novelist, who died on May 15, aged 67, domiciled in England, left estate of the gross value of £24,505, with net personalty £24,484.

Blyth Hall, North Notts.

Anxiety has been caused in North Notts that the beautiful William and Mary mansion of Blyth Hall, if not sold on or before July 8, when it is to be offered by auction by Messrs. Henry Spencer and Sons, Retford, will be offered as demolition sale.

An Appointment.

The Spenborough E.C. have approved the appointment of Messrs. R. Castle and Sons, architects, of Cleckheaton, to prepare plans and estimates for erection of new infants' school at Liversedge, also for a new senior school to serve the Scholes, Moorend and Oakenshaw districts.

Lectures on Art at Hull.

Mr. W. G. Constable, M.A. (Cantab.), Assistant Keeper at the National Gallery, has been appointed Ferens Lecturer in Fine Art for the session 1930-31, in succession to Sir Charles Holmes. Mr. Constable will deliver a series of lectures during the autumn term.

Architects' Estates.

Mr. Edgar Horace Heathcote, F.R.I.B.A., of Priestcliffe, Taddington, Derby, formerly of Princess-street, Manchester, architect, a member of the firm of Charles Heathcote and Sons (net personalty £7,154), left £7,341.

Mr. John Bromet (67), of Golf Links Farm, Tadcaster, Yorks, formerly an architect and surveyor and afterwards a farmer, late president of the British Friesian Society (net personalty £32,163), left £36,638.

New Reredos, Eton Mission, Hackney.

To mark the jubilee of the founding of Eton Mission at Hackney Wick, London, E., a beautiful reredos was dedicated on Saturday by the Bishop of Stepney (Dr. Curzon) in the mission church of St. Mary. The reredos was designed by Mr. Ellery Anderson, of Cheltenham, and follows the traditional mediæval form. It is constructed entirely of oak, and the frame serves as a background to a series of carved and decorated panels, representing scenes in the life of St. Mary.

Site of Roman Fortress, York.

Portions of a Roman wall and tiled flooring have recently been found at York during excavations for a new hotel on part of the site of a fortress of Roman York, and now a further length of external walling and half an apsidal end of a building have been uncovered. These were exterior walls, and owing to the plan of the hotel investigations of the interior seemed out of the question. The proprietors of the new hotel, however, John Smith's Tadcaster Brewery, have decided to alter the plan in order that not only should the existing work be preserved, but the excavations extended, so that further discoveries might be made.

Proposed Planetarium, Edinburgh.

A motion to consider the best means for promoting the efficiency and usefulness of the Observatory on the Calton Hill was submitted by Councillor the Rev. Dr. Sloan to a sub-committee meeting of the Lord Provost's Committee of Edinburgh Town Council recently. It is understood that Lord Provost Whitson has interested himself in the proposal, and the suggestion is that the building to house the planetarium should be placed on the Calton Hill alongside the Observatory. An alternative site has also been suggested. It is stated that the cost of such a building and the necessary equipment would be in the neighbourhood of £30,000.

Welwyn Memorial to Sir Ebenezer Howard.

A memorial to Sir Ebenezer Howard, founder of Letchworth and Welwyn Garden Cities, was unveiled at Welwyn Garden City on June 22 by Lord Lytton, the president of the Garden Cities Association. The monument, which is of simple design, bears the words: "1920. Ebenezer Howard founded this town." On his own responsibility the late Ebenezer Howard purchased the land on which Welwyn Garden City now stands, and the unveiling ceremony coincided with the tenth anniversary. The memorial was erected by the Ebenezer Howard International Memorial Committee. When Sir Ebenezer Howard began the town ten years ago there was nothing but fields and woodlands; to-day there is a population of 9,000 in the garden city.

Proposed Ice-Rink, Purley.

It is learnt that Messrs. James Smith and Sons (Norwood), Ltd., of Junction Works, South Norwood, as owners, are about to erect an ice-skating rink at Purley, on the main Brighton-road. The skating surface of rink will be about 185 ft. by 80 ft., and is full-size, thus making it suitable for ice hockey, for which changing rooms, showers, etc., will be provided. A part of the rink building will contain a high-class restaurant. Under the rink will be a large garage, capable of holding 200 cars, with separate ingress and egress. The entrance to rink will be flanked on each side with modern shops and dwellings over. The front elevation will have red brick facings and Portland stone dressings, to harmonise with the new town hall adjoining, now approaching completion. The architect for the complete scheme is Mr. Sydney Clough, F.R.I.B.A., A.R.C.A. (Arch.), Lond., 444, Strand, W.C.2.

Famous Building as Village College.

A munificent gift has been offered to the county of Cambridge in connection with its scheme for village colleges. Messrs. Chivers and Sons, Ltd., Histon, it was reported at a special meeting of the Cambs Education Committee, have offered to present to the County Council the premises and part of the park at Impington Hall, to be used as the nucleus and site of a village college for the Histon and Cottenham area. The building of Impington Hall was begun in the middle of the sixteenth century by John Pepys. In his diary Samuel Pepys records a visit he paid to his Uncle Talbot and Cousin Roger, who was Recorder of Cambridge, at the hall. The building is in a good state of preservation and repair, with central heating, and electricity installed. Messrs. Chivers offer 11½ acres for the site of a new block, and for a playing field. They also make the liberal offer to undertake that the surrounding parklands, about 42 acres in extent, which are finely timbered, shall not be built upon without consultation with the Committee.

COMPETITION NEWS

Proposed New Municipal Buildings, Newcastle-on-Tyne.

By 25 votes to 17, Newcastle City Council has approved of the Eldon-square site for its new municipal buildings. This decision marks the end of three years' discussion on the subject. The cost of the proposed buildings, it was estimated, would be £738,000—this including £190,000 for land and £48,000 for furnishings. It is understood that the Parliamentary Committee will now make the necessary arrangements to promote a Bill to secure powers of compulsory acquisition of land required, and a special committee is authorised to obtain designs for the new building.

Public Baths, Kingston-upon-Thames.

The assessor in this competition, Mr. J. Ernest Franck, F.R.I.B.A., has made the following award, which has been accepted by the Corporation:—

First Premium (£300): Messrs. Victor Bain and Allan Johnson, 38, Albion-street, Leeds.

Second Premium (£200): Messrs. F. J. Horth and H. Andrew, Custom House Buildings, Whitefriargate, Hull.

Third Premium (£100): Mr. C. B. Smith, XI, New-court, Lincoln's Inn, W.C.2.

Fourth Premium (£50): Messrs. L. H. Bucknell and R. Ellis, 104, Great Russell-street, Bedford-square, W.C.1.

COMPETITIONS OPEN.

Municipal Buildings in Chapel-road, for the Worthing T.C. Premiums of £350, £250, £150 and £50. Mr. H. V. Ashley, F.R.I.B.A., assessor. Conditions from Mr. J. Kennedy Allerton, Town Clerk. Dep. £1 1s.	Particulars published in "Builder."	Sending in-date.
	April 4	July 5
New Town Hall and Municipal Buildings, for the Luton T.C. Premiums of £500, £300, £200 and £100. Sir Brumwell Thomas, F.R.I.B.A., assessor. Conditions from Mr. W. Smith, Town Clerk, 2, Upper George-street. Dep. £2 2s.	Mar. 14	July 31
Two Council schools at Dudley, for Local Education Authority. (1) At Priory Estate, for 400 children; (2) at Brewery Fields Estate, for 320. Open to architects with offices within 15 miles' radius of Dudley. For each: Mr. H. T. Buckland, F.R.I.B.A., assessor, and £150, £100 and £50 premiums. Conditions from Mr. J. Whalley, Education Offices Dep. £1 each	April 25	July 31
Lay-out of Sea-front, Bangor (County Down, Ireland), for B.C. Premiums £150 and £50. Prof. L. P. Abercrombie, F.R.I.B.A., assessor	May 9	Sept. 1
Improvement Scheme, English-street, Carlisle, for T.C. Premiums of £300, £200 and £100. Mr. Francis Jones, F.R.I.B.A., assessor. Dep. £1 1s. Conditions from Mr. P. Dalton, City Engineer, 18, Fisher-street, Carlisle	May 9 & 16	Aug. 30
Library at West Humberstone, for Leicester Corporation. Premiums of £75, £50 and £25. Mr. Hugh Gold, F.R.I.B.A., assessor	May 16	—
Site Development, Liverpool, for General Building Syndicate, Ltd. Premiums of £250, £100 and £50. Conditions from Secretary, 36, St. Martin's-lane, W.C.2	May 16	—
For local architects only. Designs for new Market Hall, for Southport C.B. Mr. Percy Worthington, assessor. Premiums of £100, £50, £35 and £20 ...	June 6	July 31
New Grammar School at Ramsey, for the Isle of Man E.A. Mr. T. Taliesin Rees, F.R.I.B.A., assessor. Conditions, before July 1, from Mr. T. R. Lewis, Education Office, Douglas, I.-O.-M. Dep. £1 1s.	June 13	Sept. 30

THE PRESERVATION OF ST. PAUL'S CATHEDRAL.

At Monday evening's meeting of the R.I.B.A., at 9, Conduit Street, a paper on this subject (the work of Capt. Stanley Peach, and Mr. W. Godfrey Allen in collaboration) was read by Mr. Godfrey Allen before a large and keenly attentive audience. In opening the meeting, the President (Sir Banister Fletcher) said the object of their meeting was to celebrate the triumphant completion of the great undertaking to secure the safety of the fabric of St. Paul's Cathedral, which had occupied over 17 years, and to do honour to the architects and engineers who had been responsible for the great task. The men whom they were honouring included Sir Aston Webb, R.A., one of their most revered past-presidents; Mr. Mervyn Macartney, the veteran Surveyor to the Cathedral; Mr. W. D. Caröe, who did valuable work in the early days of the problem; Captain Stanley Peach, who had been the representative of the R.I.B.A. on the Committee that was dealing with the matter since the year 1925; and, lastly, Mr. Godfrey Allen, the Assistant Surveyor, who had been in the closest contact with the work for many years past. They had also the pleasure of having with them that night the following representatives of the engineers who had assisted in the task:—Sir Basil Mott, C.B., Lt.-Col. C. E. P. Sankey, D.S.O., Lt-Col. Sir Charles L. Morgan, C.B.E., Sir George Humphreys, K.B.E., and Mr. E. F. C. Trench, C.B.E.

On Wednesday, by the re-opening of the Metropolitan Cathedral, at which Their Majesties the King and Queen would be present, there would be celebrated a national event—indeed, an Empire event—for every section or our nation, and every part of our Empire, had been aroused to interest to the point of contributing financially to make the work possible. The trustees of the Cathedral, under the lead of the devoted treasurer, Canon Alexander, the architects, successively and together, the engineers, and above all, the nation and the Empire, all had worked in their several ways, and many had contributed through the opportunity so patriotically supplied by *The Times* to provide the means for the safeguarding and preservation of the Cathedral. From all these various sources the world over there had been supplied in sums, large and small, no less than £450,000, and this had been done in times of increasingly heavy national taxation. This was material evidence of the place our great Cathedral held in the heart of the British Empire.

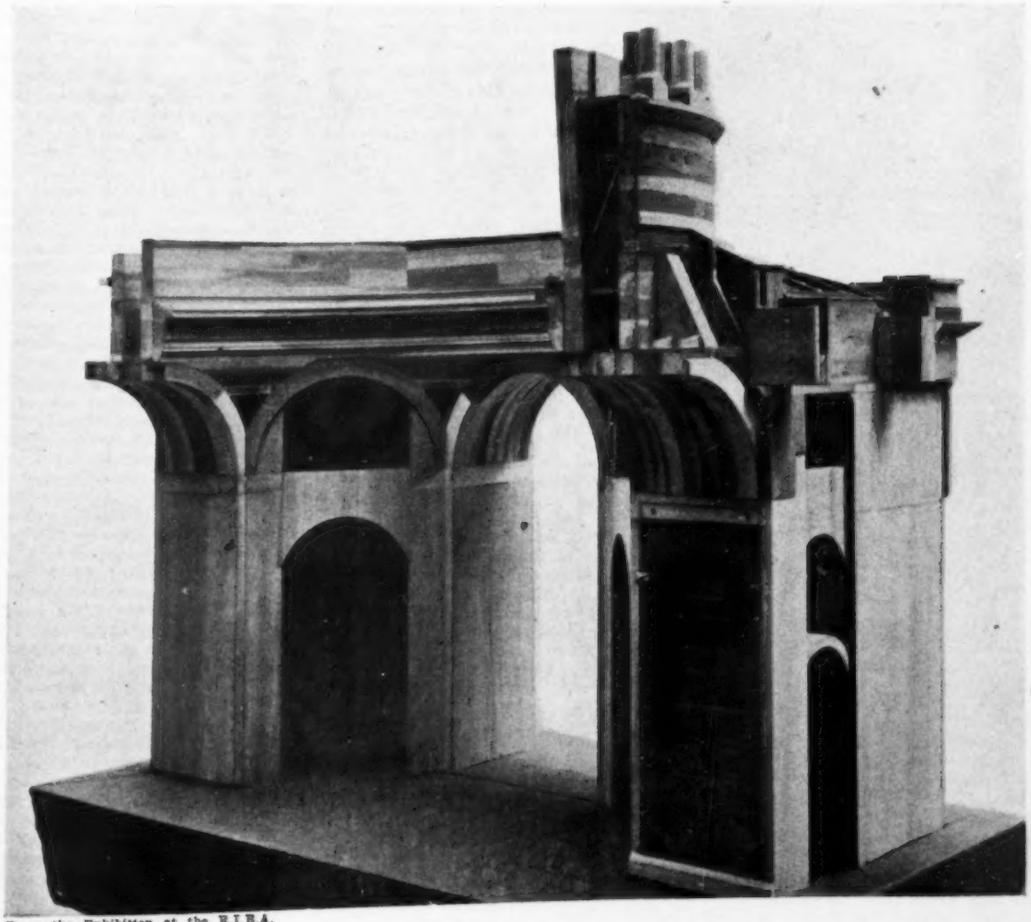
In this work of securing the stability of St. Paul's and its mighty dome, they could also claim that honour had been fitly paid to the genius of Sir Christopher Wren. When Wren drove up from his house in Hampton Court and sat to meditate under the dome which he had raised to the glory of God over the Cathedral for a people's worship, could he ever in his wildest dreams have imagined the gigantic changes in locomotion and traffic, which, with its increasing vibrations, would be a threat to the stability of his fabric? We must still have a care that no further developments for traffic convenience should be allowed to threaten the future stability of his masterpiece.

In the course of his paper, Mr. Godfrey Allen said most of the defects which had been met with arose from two principal causes:—

(1) The settlements due to the foundations.

(2) The unsatisfactory materials and methods employed in construction, both of which led to consolidation of the building.

Had Wren carried his foundations through to the London clay, much trouble would have been saved. There would have been little or no subsidence due to compression of soil, and the stability of the building would not have been a prey to the numerous underground operations which had taken place in its vicinity. Showing plans on the screen, the lecturer said they showed the general nature of the settlements which occurred. First, the heavy masses which comprised the main piers, bastions and west towers settled in relation to the lighter walls surrounding them. Later, as the weight of the dome piled up, further settlement took place between the piers and bastions. These settlements were, however, irregular and comparative



From the Exhibition at the R.I.B.A.

St. Paul's Cathedral: Model of Dome Area, showing new reinforcement and chains around drum.

St. Paul's Cathedral : One of the chains around the drum of the Dome

levels showed them to have been greatest at the south-west quarter of the dome. Although the settlements were irregular, there was no substantial difference in the levels of the eight piers. The inclination of the piers from the vertical, which arose from causes which would be referred to later, was also very small and fairly uniform, and the extent of it was shown on the theodolite survey in the exhibition.

These slight irregularities of settlement were probably due to the uneven temper of the soil and the partial compression of it by the old cathedral. There was some obscurity respecting the relation of the axes of the two buildings to one another; but whether they be as Mr. Penrose supposed, or as indicated on a plan attributed to Wren in the library of "All Souls," Oxford, there were very few places in which the new foundations could have been entirely clear of the old, and apparently there was only one of the eight piers which stood on the virgin ground. Another factor leading to consolidation was the use of uncoursed rubble as an infilling to the walls, and especially to the piers. In the crypt, where the piers were widened and projected on each side beyond the faces of the piers above, the weight was entirely carried by the rubble. There was evidence in the building that compression occurred and that the casing fractured in many cases from this cause. The results of consolidation were to produce dislocation in many of the vaults, arches and walls, but this did not appear to have surprised or alarmed either Sir Christopher Wren or the builders, who, no doubt, anticipated some such movement. The damage was, however, very extensive, and the repairs undertaken to remedy it were commenced about 1703, and continued spasmodically under the cathedral surveyors, James, Fliteroft and Leadbetter, and a fairly comprehensive scheme of restoration was carried out by Robert Mylne, which was completed at the end of the eighteenth century.

It was still an open question how far these early defects and also some of the later ones, were natural and normal to building work, and, therefore, to be expected, or how far they were accidental and unexpected. It might be assumed that all defects caused by the building finding its natural bearing and from normal consolidation had been repaired by this time. There was no evidence of movements from these causes since, and no record of exceptional repairs having been required again until 1897, when Mr. Somers Clarke became cathedral surveyor. Just before this, however, while Mr. Penrose was surveyor, trouble arose from the corrosion of iron cramps extensively used as a metal bond, according to the common practice in the Middle Ages, both in the original construction and in subsequent repairs. In the use of iron, Wren did not practise what he preached, if the Parentalia represented his views in stating "in cramping of stones no iron should lye within 9 in. of the air." Here it was found everywhere, often within a few inches of the surface, and when sufficient time had elapsed for corrosion to take place the stones spawled and fractured in all parts of the building. Even in the time of Cockerell, who preceded Penrose, fractures had taken place in the masonry from this cause. Penrose appreciated its gravity, carried out extensive repairs, and gave warning of the far-reaching nature of the trouble ahead. The work he did in removing these cramps was a valuable contribution to the preservation of the cathedral.

Mr. Somers Clarke had to face a more serious situation. The superstructure was carried by the inner and outer drums, the great and original box girder which Sir Christopher Wren designed and intended to act as a single unit. He connected these drums at intervals by radial and cross walls throughout the whole circumference. The composite structure partly rested on a platform consisting of several courses of large, well-bonded masonry spread over the front ends of the piers and the haunches of the adjacent arches. This platform was supported by the piers independently of the arches, which seemed to function mainly as struts between the piers, precautions being taken by inverted arches placed over the extrados of the great arches, to prevent them rising while acting in this way.

The load on the inner drum was several thousand tons more than on the outer drum. This inequality of weight on the green structure, which had been built very quickly, made itself felt and caused considerable disturbance in the radial walls, which was followed by some independence of action of the drums and consequent incidence of the loads on the piers. This slightly affected the poise of the building above the eight piers and great arches, so that the equilibrium was not quite so perfect as might be expected from the design. The crippling which followed reacted on the colonnade of the peristyle, which was tied back to the inner drum by an elaborate system of iron ties. The arches between the columns and the drums were dislocated, and in many cases the voussoirs and the roundels were fractured. The movements of the colonnade disturbed the worn and defective paving of the stone gallery above it, which allowed water to percolate through the joints to the masonry below, and this set up corrosion in the numerous iron rods mentioned. There was a continuous chain of ties round the entablature, the corrosion of which seriously displaced and fractured the stonework, chiefly in the frieze and cornice.

Mr. Somers Clarke repaired the stone gallery and made it waterproof, and very largely reconstructed the upper part of the colonnade. His work, completed some twenty years ago, was standing perfectly to-day, and had shown no sign of movement, in spite of a great deal of work involving structural disturbance which had been carried out since in its vicinity, and below it.

Meanwhile, however, other causes of trouble had not been entirely at rest. Several building operations carried out in the vicinity of the Cathedral and requiring deep excavations and pumping, with consequent disturbance of subsoil, had caused slight movements in the structure, to which changes of temperature no doubt contributed. Also the corrosion of the iron cramps was extending and causing, first of all, superficial disfigurement, and then deeper damage, and as stone after stone fractured, the ashlar casing of the pillars became weaker and less effective in withstanding the pressure from the rubble core. Between all these causes there was continuous action and reaction which gave rise to defects in the building, which Mr. Mervyn Macartney, who succeeded Mr. Somers Clarke in 1906, had to contend with. From the experience he gained in the early years of his surveyorship and from a thorough examination of the building made when further excavations were proposed in the vicinity of the Cathedral, which caused some apprehension, he was impressed by the extent of the superficial damage, and, feeling dissatisfied with the condition of the dome structures, he advised a consultation with Sir Francis Fox, who took an even more grave view of things, and a further conference with Mr. W. D. Caröe followed. A scheme of work was prepared in consultation with Mr. Caröe, and in so far as it concerned the dome structure it included some grouting by gravity, as experiments with grouting by pressure carried out by Sir Francis Fox by somewhat similar methods to those used by him at Winchester had not proved very suitable to St. Paul's. Under this scheme of repair, among other things Mr. Macartney restored the two piers in the south transept, which work, as far as it went, proved satisfactory. The defective condition of the masonry which it disclosed increased his anxiety, and this was further emphasised by the grave views held by Sir Francis Fox, which became common knowledge in 1921.

Sir Basil Mott was then consulted, and advised a joint committee of architects and engineers to examine and report on the condition of the dome structures. Sir Aston Webb and Mr. Mervyn Macartney served as architects, and Sir Basil Mott, Sir George Humphreys and Mr. E. L. Trench as engineers. Sir Aston Webb was elected chairman. This committee (or as it had been called "The Commission") inaugurated the long and thorough examination of the dome structures, and recommended the preservation work, the completion of which was to be celebrated this week. A thorough survey of the building was commenced, and a great deal of useful research and many important experiments were carried out, which proved of great value to the subsequent work. The second report of the Commission towards the end of 1924 was followed by the famous Dangerous Structures Notice, which fired popular imagination and gave rise to some panic over the safety of St. Paul's. Funds were collected in response to appeals made early in 1925 by Canon Alexander, the Cathedral treasurer, and a representative committee was appointed to administer these funds. The committee advised the closing of the dome area to facilitate and expedite the preservation work recommended by the Commission, and appointed its technical members as a works committee to carry it out. Like its predecessor, this was also a joint committee of architects and engineers. Sir Basil Mott became chairman, and it included the engineering members of the previous Commission, namely, Sir George Humphreys and Mr. Trench, and also Sir Charles Morgan as repre-

sentative of the Institution of Civil Engineers, with Sir Aston Webb and Mr. Mervyn Macartney as architects and Mr. C. Stanley Peach as representative of the R.I.B.A. The work for which this body had been responsible during the last five years was limited to the dome structures, except for the survey, which on their advice had been extended to the whole building. Lieut. Col. Sankey was appointed resident engineer, and the lecturer resident architect, each responsible for the work in their respective departments. The cementation and reinforcement was carried out under contract by the François Cementation Co., but practically the rest of the work was executed by the Cathedral staff supplemented by direct employment of additional labour, under the management of Mr. Bolwell, the Cathedral Clerk of Works. This somewhat uncommon arrangement had proved well suited to the special requirements of St. Paul's.

The restoration work carried out by the works committee might be roughly classified as follows :—(1) Engineering and architectural surveys and research. (2) Work to the structure, including grouting and reinforced metal work, the repairs of masonry and structural work incidental thereto. Hard and fast lines could not be drawn between these sections of the work, nor could they be considered in watertight compartments. In practice, each benefited by the results and experiences of the other.

The Engineering Survey and the observations connected with it which were inaugurated by the Commission of 1921, were reorganised and extended under the works committee. Its record consisted of volumes of figures, levels and diagrams of measurements, taken with the most perfect and accurate instruments obtainable, and included the selection of suitable points in the building for measuring movements, thus keeping it under complete and continuous observation. Measurements as fine as one-thousandth of a foot could be observed, and had actually been taken and recorded.

At any future time the smallest movement of the building could be detected and its direction and extent ascertained and compared with the established records, and this had already furnished reliable and valuable data on which to base opinion.

The Architectural Survey consisted of a series of complete and accurate plans and sections, and numerous isometric studies and photographs to illustrate the local and general research into the structure, and included the construction of many scale models both of the building and various works proposed from time to time. Much useful information was obtained from these models, and they greatly facilitated the consideration of the works carried out. As part of the architectural survey, a complete examination was made of the whole of the ashlar casing of the eight piers and the condition of each stone was recorded on a series of drawings. These had been supplemented by photos and further drawings made during the progress of the work, which indicated the position and size of every new stone and cramp inserted, and the condition of the piers as completed.

The models included a somewhat unusual one which threw some light on natural arch action and the principles which might have guided Wren to some extent in his design of the building. In the early part of the seventeenth century, Gallileo's theory that a catenary curve was the proper figure for an arch of equilibrium, was announced, and it was probable that Wren was cognisant of this. If this was so, he no doubt considered its bearing on the design of a circular structure. To test this theory, in its relation to St. Paul's, they suspended chains over a section of the building. These chains traced a natural arching of the structure. They also marked the position of some of the principal settlements. When a weight was added proportional to the lantern and chain, the latter corresponding to the weight of the cone, the chain traced the unusual shape of the cone almost exactly, as shown on the model. Showing an original study by Wren in the British Museum, for the dome of St. Paul's, the lecturer said a chain superimposed on this drawing coincided with the curve drawn by Wren on both the sections, which he seemed to have used as the guiding line of the design. It also corresponded to one of the chains on the model previously shown. In studying the effect of compression in the structure from the various causes enumerated, an articulated model was found very helpful.

Another model of quite a different kind, of a portion of the actual building itself, was designed to show the hidden construction in one of the piers from the foundation to the top of the buttresses. This model was helpful in considering work proposed to strengthen the building, and it also formed a reliable basis for the construction of other models.

Among matters of investigation he would mention the iron ties inserted by Wren between the piers and bastions. The position of these was located at the four corners of the crossing, one set at gallery level, and one in the walls some feet higher, all being below the springing of the great arches. The lower set consisted of two flat iron bars 4 in. by ½ in., and the upper of two square bars 2 in. by 2 in. The arrangement was the same in all cases, except in the north-west quarter, where only the upper ties existed. Investigations and electrical tests revealed that most of these ties were broken. The ends of these ties were turned down and anchored into large stones in the bastion.

The second part of the work, namely, that carried out to the building, comprised the strengthening of the piers and the superstructure above the platform level. A general programme was first prepared, but this was subject to variation to suit it to the special requirements of each pair. Showing slides, the lecturer said the first was an elevation of one of the piers, on which the positions of the injection holes were marked. These were spaced about 4 ft. apart horizontally and 5 ft. vertically. The next was a plan of these holes at one level in a pier in the crypt, and the third was a plan of one of the church floor piers showing the holes at three levels. The length and direction of the holes was determined with the object of knitting together with the reinforcement all parts of the masonry, the length in many cases being as much as 18 ft. A series of these holes, each 2 in. in diameter, was drilled to the required length from either side of the pier, and the dust was driven out by compressed air. The grout, consisting of equal parts by volume of loose cement and water, was then injected at a pressure of 50 lb. per sq. in., at the hole, allowance being made for any great loss of pressure due to head. After an agreed time (generally a day) the cement was drilled out of the holes, which were then injected again, the operation being repeated at least twice, and in some cases as many as six times, before refusal point was reached. Finally, reinforcing rods were inserted in each hole and grouted up. The question of material for reinforcement received long and careful consideration. After tests had been made by the engineers and the National Physical Laboratory, it was decided to use Firth "Staybrite" steel, which showed a

From the Exhibition at the R.I.B.A.

St. Paul's Cathedral: Model showing box girder construction, etc.

remarkable resistance to corrosion, even when tested with a rough surface left by the rolling of the bars.

In consequence, however, of the non-corrosive nature of this material, difficulty was found in obtaining a satisfactory adhesion between it and the cement. An oval indented bar was eventually selected, which obtained a strong grip of the cement without sacrificing any of its strength through reduction of sections. The total quantity of cement injected in the eight piers, from the foundations to the underside of the platform, which is about 80 ft. above the church floor, was approximately 90 tons, and 37 tons of reinforcement were required. In the course of the work, especially when replacing Wren's broken ties, to which reference had been made, cores were recovered showing that the grout had successfully bound together the internal aggregate. As soon as the grouting and reinforcement was sufficiently advanced, the work of restoring the ashlaring and removing the iron cramps of the piers was put in hand. The veneer, or splintered parts of the stones were cut away until the depth of the fracture was reached. New stones were then inserted and cramped to the old with "Delta" metal cramps. Where, however, the damage extended to the full depth of the original stone, they were generally taken out entirely and replaced with bond stones carried back to the core. Over one thousand iron cramps, varying in size from 2 in. to 3·4 ft, had been removed. The capitals generally were in a shocking condition. Many of the volutes and acanthus leaves had broken away and were held in position only by means of copper wire, and in some cases even string. The same remark applied to the members of the main cornice, particularly the egg-and-tongue enrichments, which were riddled with iron and ready at any time to fall away. Wren adopted a system of cramping the stones together, which resembled a series of chains in each course of the ashlaring, and this system was followed as far as possible when inserting the new "Delta" cramps for replacing the iron ones. As part of the work of strengthening the piers, a system of sixteen stainless steel tie bars, of which eight were 4 in. in diameter, and eight 3 in. in diameter, were inserted at gallery level, to connect the end of the piers with the inner walls of the bastions to do duty for Wren's broken ties. They were attached at either end to plates concealed in the masonry.

The problem of tying together the two drums so as to prevent further independence of action between them was considered with the aid of one of the models. A system of bracing was inserted on either side of the radial walls to tie the drums together, and thus restored the bond which Wren had intended. It consisted of 48 diagonal stainless steel tie rods 38.6 ft. in length, and 4 in. in diameter, with bearing plates at either end, the lower being buried in the masonry of the Whispering Gallery, and the upper resting on the outer drum at the level of the peristyle. These were supplemented by 96 smaller horizontal rods about 16 ft. in length, and 2½ in. in diameter, half of these being near the upper, and half at the lower level. The system was completed by a reinforced concrete raft, taking the place of the old lead and timber roof of the peristyle, which was not only more enduring and incombustible, but also acted as an additional hoop or chain round the drum. The radial walls between the drums, as well as the projecting buttresses, were grouted and reinforced in a similar manner to the piers, the reinforcement being carried through to the inner drum. Two chain belts encircled the drums. The upper one was erected immediately over the buttresses, and the lower just over the extrados of the great arches, which was the lowest possible level at which it could be fixed as a continuous level band without cutting into the arches. The upper belt consisted of 30 sets of links, 15 of four members, and 15 of three, bent to the curve of the drum, which at this level was 438 ft. 10¾ in. in circumference. The links were connected by vertical pins 3½ in. in diameter passing through the eyes. When in position, the chain was tightened by wedging from the drum and finally encased in concrete, the wedges being removed during the latter operation. The lower belt was similar in design and strength, and was now being erected. It was interesting to compare these belts with the great chain used by Wren. Each link of the latter consists of eight bars welded together and turned down at the ends into a circular ring which was a common type of metallic bond, extensively used in the Middle Ages. The scaffolding and shoring used above the church floor was in itself a very extensive undertaking.

The underlying principles of the preservation work had been to fortify the building without marring its beauty and, as far as possible, without interfering with the historical value of Wren's craftsmanship. By making use of the inherent strength of his masterly design, they had tried, with all the aid that modern science lent them, to strengthen its weaknesses and to pass it on intact for future generations, leaving no visible traces behind them of the labours of the last few years.

Canon Alexander, proposing a vote of thanks to the authors of the paper, remarked upon the fact that the Committee had been entirely unanimous on the processes adopted for the safety of the Cathedral. If the foundations were not interfered with by excavations, the Cathedral would be as strong as, or stronger than, when it was originally built. Mr. Allen had developed a great knowledge of the Cathedral, and they would always owe a great debt to him for the work he had done for it.

Sir Basil Mott, seconding the motion, said that in works of that kind architects and engineers should always be associated together.

Captain Stanley Peach said he was very grateful for the vote of thanks for the small services which he had been able to render as their representative.

Mr. Allen briefly replied and the meeting terminated.

THE BEAUTY OF SKYSCRAPERS

Canon Hannay (George A. Birmingham), speaking at the annual meeting of the Bristol Kyrle Society, said that the Society existed for the purpose of preserving and increasing beauty, and warring upon hideousness, and he was sure they would not suspect him of any want of sympathy with such objects, but he would begin with a word of warning, and that was that before they made war on hideous things to make sure that they were hideous. He was old enough to remember when the American skyscraper was a term of utter contempt and reproach as the most hideous thing man had yet created. Then somebody pointed out that the sky-line of New York as seen from Hoboken as he crossed the ferry was an extraordinarily beautiful thing. They then saw those things were a new form of beauty which had only appeared to them to be ugly because they were new. Almost the same thing happened to us nearer home with our railway stations. We saw these new erections with their iron girders and interlaced struts and awkward roofs and thought such things abominably ugly. Then someone drew them for us and the cranes and things along the quays, and we suddenly saw a new beauty. He wanted to warn them not to be quite sure that petrol pumps were hideous. Apart from their extreme utility to the motorist who was going along at a great pace and wanted to see the thing he needed at a long distance off, he was not sure that these splashes of colour in the green and grey of the English landscape were not improvements, though when he said that he expected derisive laughter. But some time, perhaps, an artist would show us that petrol pumps were beautiful, and then we might see the beauty through his eyes. The speaker said his own two pet abhorrences were paper litter and the art-conscious house or bungalow.

Reference was made at the meeting to the generous action of Mr. Melville Wills, who had purchased another large portion of the hanging woods of Leigh, which he intends to hand over to the National Trust in order to preserve the beauty of Avon Gorge for all time.

SOCIETIES AND INSTITUTIONS

R.I.B.A.

We gave in our last issue the result of the annual elections to the Council of the R.I.B.A. We now give a list of the Standing Committees.

Art Standing Committee.

Fellows.—Messrs. E. C. Bewlay (Birmingham), H. C. Bradshaw, C. F. W. Dening (Bristol), H. S. Goodhart-Rendel, C. H. Holden, Arthur Keen, Edward Maufe, F. Winton Newman, M. H. Baillie Scott, Louis E. de Soissons.

Associates.—Messrs. L. H. Bucknell, R. A. Duncan, E. Maxwell Fry, the Hon. H. A. Pakington, M. J. Tapper, E. Berry Webber.

Licentiates.—Messrs. S. G. Short, A. S. Soutar, F. R. Taylor.

Literature Standing Committee.

Fellows.—Messrs. Martin S. Briggs, A. S. G. Butler, F. Chatterton, J. Murray Easton, D. T. Fyfe (Cambridge), A. E. Henderson, H. C. Hughes (Cambridge), Basil Oliver, Lionel G. Pearson, C. S. Spooner.

Associates.—Messrs. H. P. L. Cart de Lafontaine, H. W. Chester, A. Trystan Edwards, Professor F. S. Granger (Nottingham), E. R. Jarrett, Grahame B. Tubbs.

Licentiates.—Messrs. A. B. Hayward, F. H. Mansford, Arthur J. Penty.

Practice Standing Committee.

Fellows.—Messrs. H. V. Ashley, H. S. Fairhurst (Manchester), E. Bertram Kirby (Liverpool), G. C. Lawrence (Bristol), H. D. Searles-Wood, J. A. Slater, Sydney J. Tatchell, Percy E. Thomas (Cardiff), F. T. Verity, W. E. Watson.

Associates.—John Batty, R. Norman Mackellar (Newcastle-upon-Tyne), C. J. F. Martindale (Deal), J. Douglas Scott, Edward Unwin, Charles Woodward.

Licentiates.—Messrs. F. R. Betenson, J. W. Denington, A. Seymour Reeves.

Science Standing Committee.

Fellows.—Messrs. Robert J. Angel, G. R. Farrow, W. Alexander Harvey (Birmingham), A. J. Hope (Bolton), Alan E. Munby, Edward J. Partridge, T. E. Scott, C. F. Skipper (Cambridge), Samuel P. Taylor, Raymond Unwin.

Associates.—Messrs. Hope Bagenal, J. A. Bessant, Eric L. Bird, Edwin Gunn, A. F. Hooper, C. S. White.

Licentiates.—Messrs. A. H. Barnes, Percy A. Hopkins, Percy J. Waldram.

At a general meeting of the R.I.B.A. held on Monday, June 16, the following members were elected :—

As Fellows.—A. F. Benjamin, L. H. Bucknell, H. B. Challen, C. W. Clark, P.A.S.I., J. A. Clarke, P.A.S.I., E. N. Clifton, B.A.(Cantab.), P.A.S.I., G. W. Jackson, T. S. Sutherland, W. L. Dowton, W. A. Greenen, H. M. Lawrence, A. H. Walkley, H. Bragg, M. T. Cantell, R. Robertson.

As Associates.—W. G. Bennett, G. R. Beveridge, J. N. Cowin, B.Arch.(Liverpool), D. R. Duncan, N. B. Hillier, H. W. Kelham, W. G. McIntosh, A. N. Macleod, R. F. Orfeur, J. A. Ritchie, A. P. Robinson, A. Tough, R. N. Wakelin, Mary L. J. Wall.

THE NEW SPIRIT IN ARCHITECTURE

By PROFESSOR A. F. WICKENDEN, F.R.I.B.A., A.M.I.C.E., F.S.I., Director of Architectural Studies, l'Ecole Polytechnique Royale, Cairo.

A careful study of the pages of any book dealing with the "History of Architecture" leads to the conclusion that there is not a chapter so full of intense interest as that which may hereafter be written concerning the period through which the architectural world is now passing. The men now in practice, or those about to engage in the practice of architecture, may indeed congratulate themselves on being in active service during a period of development so full of possibilities and adventures.

It does not require very deep consideration to realise the fact that architecture is, and always will be, the expression of the life of the people. This, however, is a somewhat passive point of view and cannot satisfy any enthusiastic architect with strong convictions. Such a man will aim not merely at expressing the lives of the people amongst whom he works but rather at helping to direct them. With this aim in view the architect must keep himself in close contact with all phases of human activity and must cultivate the capacity of looking ahead, in order that he may develop his art in the present so as to meet the possible demands of the immediate future. This makes the architect's work a much more inspiring and progressive business than the continuous endeavour to bring the architecture of the past into line with the requirements of the present.

The new spirit that is to-day so apparent in architecture is not the result of the sudden discovery of a new style or fashion, mainly concerned with a few exploits in ornamental details, although at the same time it does open up great possibilities for originality in decorative treatment as distinct from applied decoration. There is, unfortunately, a widespread and misleading use of such terms as "style moderne" frequently referring to nothing more important than an extra deep frieze with florid ornamentation or some jazz decorations. These detail "stunts," though they may be ever so successful, do not constitute the essence of the new spirit in architecture any more than acanthus leaves, Ionic volutes, and other characteristic details constitute Classic architecture.

The healthy development of architecture, which is so strongly in evidence on every side to-day, simply means that architects are more and more becoming alive to a number of fundamental facts. They are realising that architecture is born of utility; that it is impossible successfully to apply the same forms of design to the use of natural materials as to artificial materials, such as reinforced concrete, so extensively employed in modern construction; that if the work of the architect is to make any strong appeal to intelligent people it must be rational in character; that the world is sick to death of applied and meaningless architectural decoration; that architecture must play its part in the solution of the difficult economic problems with which the world is confronted.

The great forward movement in architecture must be attributed almost entirely to the modern methods of training followed at the leading schools of architecture. In the old days a student was condemned to devote far too many hours to the study of architectural history and the application of the traditional styles, so that any artistic initiative, instead of being developed, was frequently entirely destroyed.

It is happily now recognised that architectural students should be trained to understand and be inspired by the beauty and grandeur of ancient architecture and to be governed by the same unchanging principles of proportion, balance and rhythm as governed the master-architects of the past, but also to realise that classic and mediæval conditions of life do not prevail to-day.

The architectural student must learn to make full use of modern materials and methods of construction and in designing his buildings properly to assess the relative values of their different essential requirements and properties. For example, he must remember that the primary function of a dwelling-house is to constitute a home, and that the first essential of a lecture theatre is that the audience should be able distinctly to hear the speaker. Beauty must always be the aim of the architect, but its attainment must not be attempted by means of extraneous effects. The successes of modern architects are being gained mainly by the masterly treatment of utility forms and essential features so that they in themselves satisfy the cravings of artistic intelligence.

LIVERPOOL SCHOOL OF ARCHITECTURE

The prospectus for the next session of this School of Architecture, which is unified with the University of Liverpool, has now reached us. The School of Architecture, founded in 1894, offers courses which are designed to provide a full professional education at a University standard for all who intend to practise as architects and who wish to acquire their training in an atmosphere of liberal studies side by side with the students of other professions. To meet the varied needs of architectural practice as they have now developed, the School offers courses of study leading, if preceded by matriculation, to the degree of Bachelor of Architecture (B.Arch.) or, if not so preceded, qualifying for the Diploma in Architecture. These courses, which are identical both for the degree and for the diploma, extend over five years and are of three kinds—the pass course, the course with honours or distinction in architectural design and the course with honours or distinction in architectural construction. The curriculum of the first three years is common to all three courses, whilst that of the fourth and fifth years in the case of students taking honours or distinction goes beyond the pass type. Under the regulations governing the courses of study students are required to spend six months of their fourth year in some approved form of practical work, usually in an architect's office where they can earn a salary. For some time past the School has established connections with certain of the best known architectural offices in New York. In consequence, capable students during the summer term and long vacation of their fourth year of study have the opportunity of securing temporary positions as paid assistants in these offices at rates of pay which, with care, cover their passages either way. Arrangements have been made to admit Liverpool students straight into the country. The School was the first to formulate and to present degree and diploma courses of a full professional kind to the Board of Architectural Education of the Royal Institute of British Architects and was the first of the six English schools now recognised by the Institute to secure for its graduates exemption from all subjects but one of the Institute's final examination. Full particulars and prospectus may be obtained from the secretary. The Principal is Professor C. H. Reilly, O.B.E., M.A., F.R.I.B.A.

Walls Made of Wood Shavings.

A new building material has been exhibited at the Swiss Industries Fair, recently held at Basle. By means of walls made of pressed wood-shavings, complete isolation from changes of temperature was obtained for a house. By this means, rooms are said to remain warm in winter and cool in summer. The process is now patented over most of the world. The shavings are pressed to such a hardness as to take a stucco or rough-cast exterior covering where desired.

WROUGHT IRON IN ARCHITECTURE*

These twin volumes form a single work together covering the whole field of ornamental metal work. They admirably combine scholarship with tactile knowledge and experience, and should fulfil the author's intention of familiarising the architect with the medium and practice of metal art. They present a repository of facts and historical and modern examples, showing the tools, describing the peculiar characteristics of the various metals and the evolution of their use and technique, and finally giving detailed model specifications. The work is primarily designed for America, where stylistic convention has persisted more tenaciously than elsewhere, and the period examples selected by Mr. Geerlings should help the architect who is compelled to design true to period to choose appropriately and should guard him from the danger of aping one material by copying it in an inferior, or different, material. Where bronze castings are too expensive let him not substitute ill-advised copies in cast iron, although, when rightly used, that material can produce fine results, as the illustrations demonstrate.

Although the author is ready to recognise the "period" design convention into which so many architects are forced by their clients, his work is mainly directed towards a true rebirth of metal craft through an appreciation of physical properties and possibilities. All this is to the good, but we might go farther than the author and suggest that the actual designing of detail is hardly in the architect's province, the ideal collaboration resting between the architect and the craftsman. The architect should define and indicate his requirements with the knowledge that the craftsman can be relied on to infuse vitality into the detail of his contribution, and our aim should be to produce craftsmen up to this high standard. The more the architect understands the intricacies of the craft he invokes the more appropriate will be the opportunities he can offer to his collaborators. Architecture in its ambitious conceptions contains an assemblage of highly technical specialities, and unless the architect possesses wide training he cannot achieve effective collaboration.

Traditional metals naturally take pride of place, and it is interesting to learn how little the craft of bronze has varied since classical times, and the increasing use of bronze panels, allied with glass to enclose steel framing, will add importance to its place in future work. The formula for copper has altered radically during the past hundred years; it is now chemically purer, but the author believes that the old alloy with its greater content of zinc, and occasionally tin, possessed more rigid and lasting qualities. It would be interesting to learn whether the original alloy more readily acquired its attractive green patina, and the author does not mention the advisability or otherwise of hastening this process by chemical means. Among new methods, the possibilities of deposited copper on glass and the use of stainless steel—sometimes combined with coloured enamels—are helpfully introduced. Ornamental metals, to be fully effective, need not only the creative impulse of the hand craftsman, but also the influence of the trained artist, to direct machine products.

These splendidly illustrated volumes show work in each country, ranging from ancient Greece to twentieth-century America, and should act as a stimulus to all concerned with fine buildings and fitments, whether they be architects, artists, or manufacturers. They should also serve as a liberal education if studied by the employing public, on whom the output of architect, artist, and manufacturer must ultimately depend.

* "Wrought Iron in Architecture. Metal Crafts in Architecture." By Gerald K. Geerlings. (New York: Charles Scribners' Sons. 1929.) Price 30s. each.

ILLUSTRATIONS

PLATES

St. Paul's Cathedral.

Apropos of the re-opening of St. Paul's Cathedral after the recent extensive works of reparation (described in a lecture by Mr. Godfrey Allen, given at the R.I.B.A. last Monday and reported in this issue), we give this week on our supplementary plates two views of the interior taken from points in the dome area.

New Smoking-room for Benchers of the Middle Temple.

This new smoking-room has been carried out in English oak worked by hand. Messrs. Dove Bros. were the contractors, and Mr. Laurence Turner was responsible for the plaster ceiling. Sir Aston Webb, P.P.R.A., and Son are the architects.

Nonington-Aylesham Central School, Kent.

This school, which provides accommodation for 480 pupils, is situated on a site eight acres in extent, at the south-eastern end of the new mining town of Aylesham. The accommodation consists of eight classrooms, woodwork room, science room, domestic training rooms, medical inspection room, staff-rooms, library, art room, assembly hall, canteen, cloakrooms and offices, and cycle sheds. The building has been constructed entirely with British materials, which, so far as is possible, are of a fire-resisting nature. Red brick facings from Canterbury, and patent stone dressings, have been used for the central feature. The external walls generally are of 11 in. hollow construction, the outer walls being 4½ in. of stocks rendered with "Snowcrete," and the inner walls 4½ in. of sand lime bricks flush pointed and left unplastered. The floors are pre-cast concrete, and the staircases cast stone, fitted with "Ferodo" non-slip treads. To cut down expense, wood boarding on breeze concrete has been used in lieu of wood blocks, and corridor floors are finished with granolithic. Bridgewater double Roman tiles have been used for the roof.

The eight classrooms are planned to have direct access to the open-air on both side walls. This has been accomplished by means of a two-story verandah, constructed of steel stanchions, concrete floor and patent glazing, with wrought-iron railings between the stanchions on the first floor. The windows to the classrooms open over their whole extent, but in inclement weather ventilation may be obtained by means of hopper inlets in the bottom panes; in addition, one leaf of each window can be opened independently as a side-hung casement. The "practical rooms" have been designed so that they can be used for evening students in connection with classes for further education. In addition, for social events, the assembly hall and canteen, divided by a folding partition, can be converted into a room of 2,475 super feet area, complete with stage and proscenium. Heating is by means of a low-pressure hot-water system, and the building is lighted by electricity. A paved courtyard, 100 ft. by 60 ft., has been provided for playing purposes. The usual playing pitches have been provided on the site at the rear and side of the school.

The work was carried out by Mr. R. J. Barwick, of Dover, at a cost of approximately £23,000, under the supervision of the Education Committee's Architect, Mr. W. H. Robinson, F.R.I.B.A.

Cley Church.

Cley was one of the places visited by members of the recent R.I.B.A. Conference at Norwich. The measured drawings of Cley Church which we reproduce are by Mr. Claude J. W. Messent, A.R.I.B.A.

"THE BUILDER" DEBATE

XXX.—THE CONTROL OF BUILDINGS.

"That the height to which buildings should be permitted to be erected in London should be left to the discretion of the designer and promoter."

Sir,—There is no doubt that the business quarters of London are rapidly reaching the saturation point under present building conditions, and that before long we shall have to look around for ways and means to keep pace with the march of commerce. That this stage is imminent is clear from the number of new districts in which development of a new type is beginning, far from the recognised centres of business.

There will be many who will say that this is a healthy sign, and that the concentration of business interests around the City has been little more than an unnecessary superstition, but business men will tell us that the easy and personal touch which is possible in a compact business centre is of enormous value to business, and that this ready contact is being lost by the spread of business offices and headquarters further west and south of the Thames. As proof of this we find a growing tendency to build higher in all places where these great blocks of offices are erected, whether in the City or elsewhere, and we are inclined to feel that those who argue upon the basis of the wider field of development have their arguments dispelled by the other tendency of higher and more capacious building.

The by-laws continue to lay down a restriction as to height which served thirty or forty years ago; but the authorities continue to relax this restriction upon occasions, so that a relaxation within a certain limit becomes the rule rather than the by-law itself, which remains in technical operation. This has given rise to an absurdity for which there is really no defence. Either our buildings must be restricted in the interests of the health and amenities of London, or restriction should be relaxed because the need for it has ceased to exist. And if relaxation is admitted, the setting of an arbitrary limit upon such relaxation is illogical and indefensible. There is no reason why we should change one set of chains for others of equal strength if more flexibility. The height of a building becomes automatically restricted by practical considerations. The interplay of land values and the cost of building set a limit upon the proposition of building upwards, and it is far healthier for these natural considerations to determine the limits of the enterprise.

We hear a great deal about the right proportions for a street; about the loss of sunlight in narrow streets flanked by high buildings; and about the traffic chaos which the concentration of a great population in a small area of a city brings about. But what is not remembered is that in most of our streets, the low suave proportions of Nash's Regent-street are already lost, in a sort of half-way house of timidity. The eighty-foot cornice with two attics over it is an unimpressive façade in the average street of London; whereas a little more ambition might make of it as impressive a feature as the narrow streets of St. Malo.

Sunlight we have also largely lost in the lower stories of our buildings, and it is ridiculous to suggest that our beshadowed streets would suffer materially by a further raising of skyline. Traffic difficulties are also a matter of prevision and ingenuity. A high enough building would justify some outlay in underground car parks and lifts, which would free the streets of much of the casual traffic with which they are at present encumbered.

Why heed the excuses of those who fear progress in any form? The important thing about the whole matter is that all enterprise, including building as one of the most important of all, should be free to find its own level without any artificial encouragement or restriction. Positive.

EXHIBITION NOTES

"Punch" Exhibition.

Mr. Punch is now housed in his new offices in Bouverie-street, and very excellent and tasteful they are. The drawings on exhibition cover a period of 50 years, almost the Victorian Era, and are representative of the work of John Leech, Chas. Keene, George du Maurier, and Sir John Tenniel, four artists whose works are so well known and who are said to have raised "Punch" to its artistic excellence, since maintained by their followers. Among the exhibits are many famous and historical cartoons and well-known jokes which never grow old, illustrated by such masters as Leech, Keene and Du Maurier; it is essential to see the masterful way these men depicted the jokes to really appreciate them. An interesting exhibit is a wood block showing the drawing on the block and the method of cutting. To the younger generation this must be of interest. The wood block certainly produced excellent printing, with all the character of the artist's work. We hope to illustrate the new premises fully in an early issue.

Society of Graphic Art.

Though a good deal of interest will probably be found in the Exhibition of the Society of Graphic Art at the Royal Institute Galleries, we cannot accept it as a fairly representative exhibition of the best work of the day. What we know of the work of our best artists makes us wonder why so little of it is to be seen in a collection of this kind. It does not seem that the opportunity to show their work in a pleasantly attractive public gallery appealed to those who represent the best that is being done. Neither in subject nor in treatment is the bulk of the work in the galleries such as one might expect to find. We noted some excellent drawings by Messrs. Squirrell, Eyre Walker, Pegram, Hanslip Fletcher, E. B. Johnson, C. H. Baskett, Frank Emanuel, and H. C. Brewer; but surely in nearly 400 drawings we should expect a much higher average quality to show what is being done to-day in graphic art.

Architectural Drawings and Photographs.

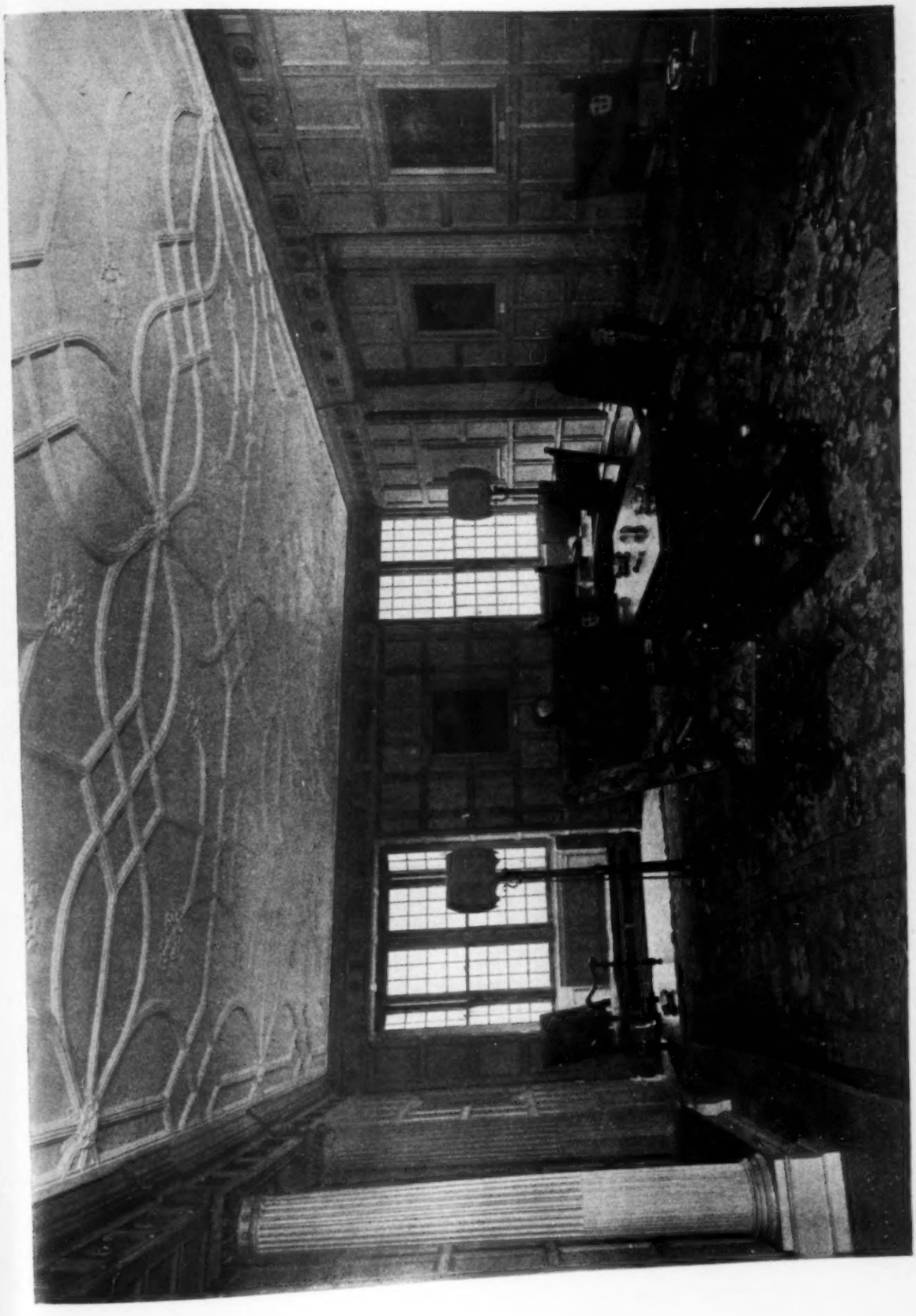
Drawings and photographs of the work of the Architect's Department of the Kent County Council were exhibited at the County Fair held in Mote Park, Maidstone, from June 21 to 25. Eighth-scale rendered drawings of the new standard Central Schools (north and south aspect types) were exhibited, showing the quadrangular plan with permanent two-story buildings on the front and two sides, with a third side of single-story light construction for the handicraft rooms, etc., which are at the moment in an experimental stage and can thus be readily altered. These schools have been planned on "open-air" lines, to procure the maximum amount of light and air. They are heated by low-pressure hot water systems, which, generally speaking, are oil fired. The use of this type of fuel has been experimented with recently in schools, and it is found that a considerable saving is effected. Several schools are heated by electricity.

It has been the aim of the County Architect to create in these buildings a similar feeling to that of the secondary schools. To obtain the effect desired, dependence is placed on scale and proportion rather than ornamentation, and in order to tone with the surroundings, local material is used wherever possible. There were also drawings and photographs of Day's-lane Elementary School, Sidcup, the Grammar School for Boys, Maidstone, Beckenham County School for Boys, Penge, and other educational buildings of the Kent Education Committee.

The County Architect is Mr. W. H. Robinson, F.R.I.B.A., and the architectural exhibit was arranged by Mr. S. H. Loweth, A.R.I.B.A., Deputy County Architect.

New Smoking Room for the Benchers of the Middle Temple.

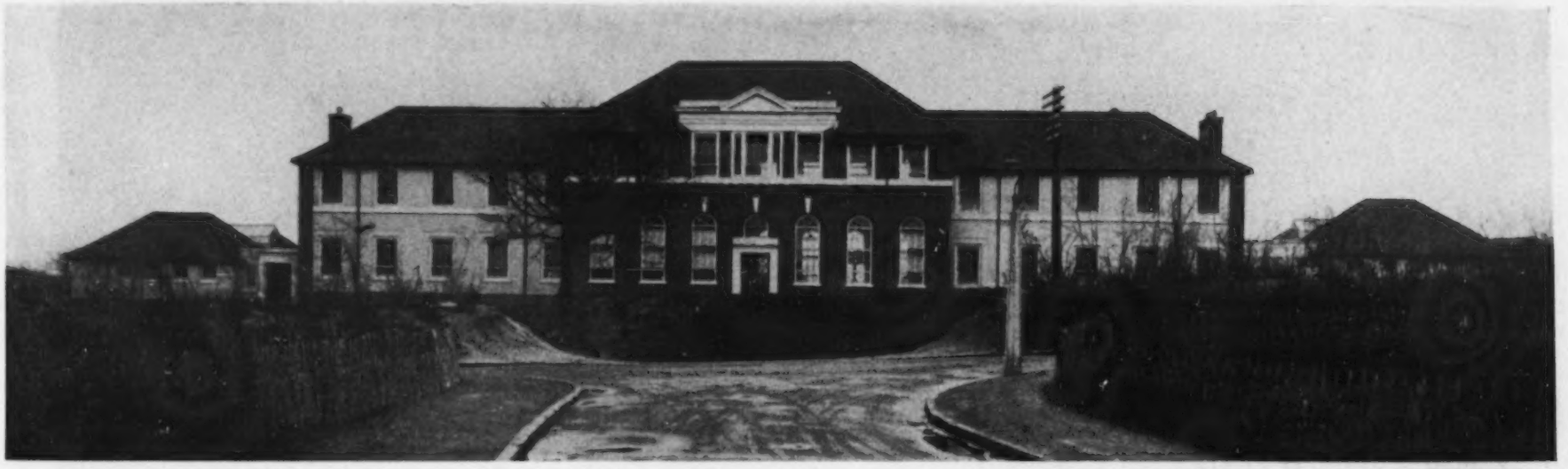
SIR ASTON WEBB, P.P.R.A., AND SON, Architects.



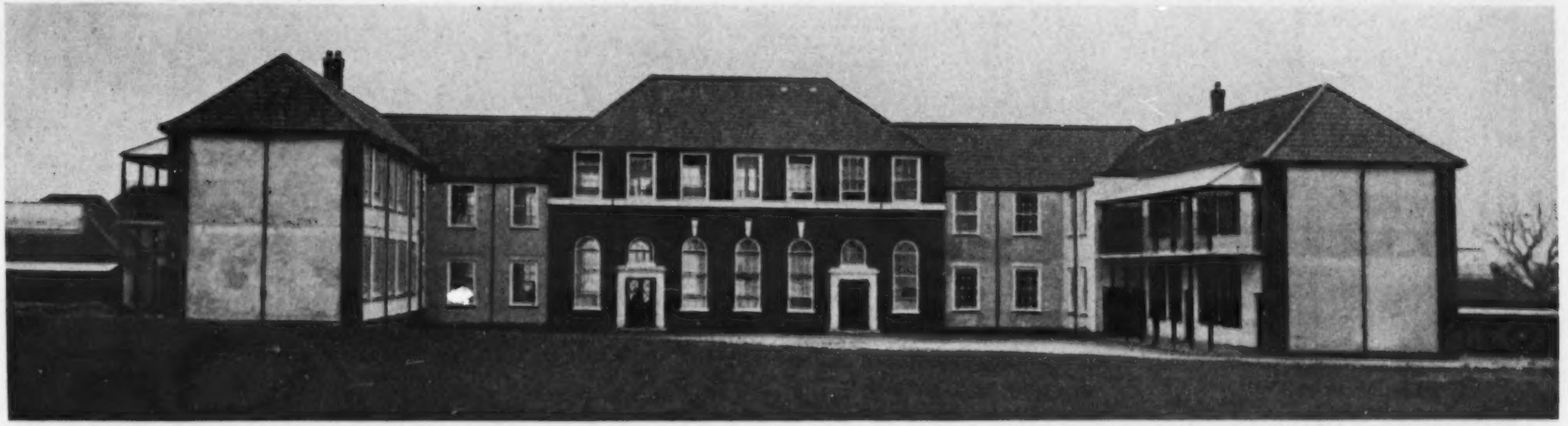
New Smoking Room for the Benchers of the Middle Temple.
Sir Aston Webb, P.P.R.A., and Son, Architects.

New Smoking Room for the Benchers of the Middle Temple: Detail of Chimney-Piece.

SIR ASTON WEBB, P.P.R.A. & SON, Architects.



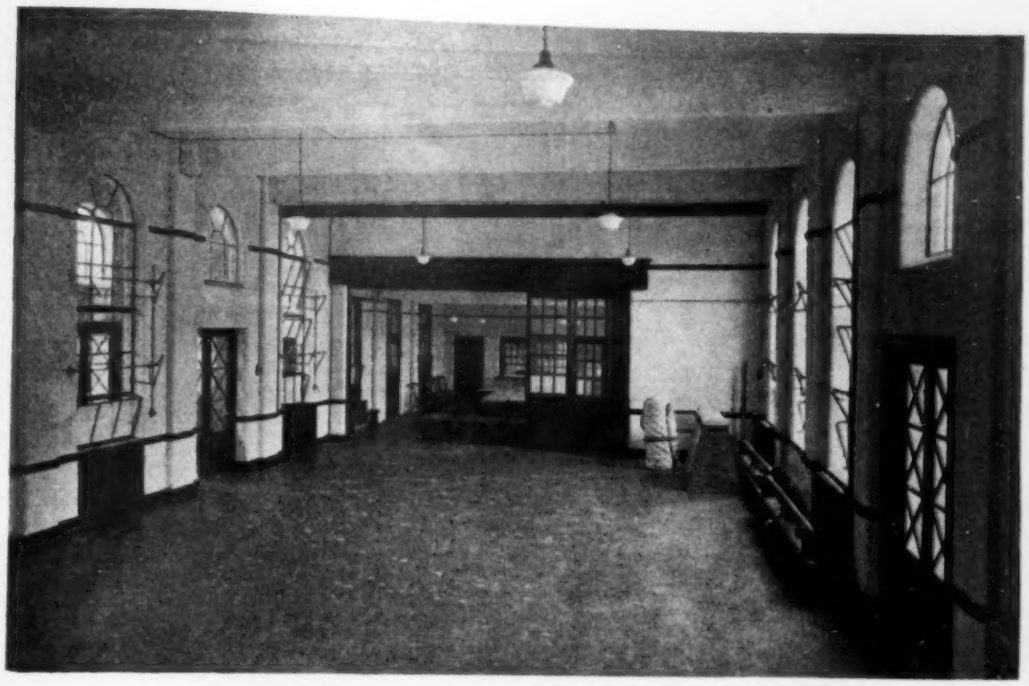
FRONT VIEW.



REAR VIEW.

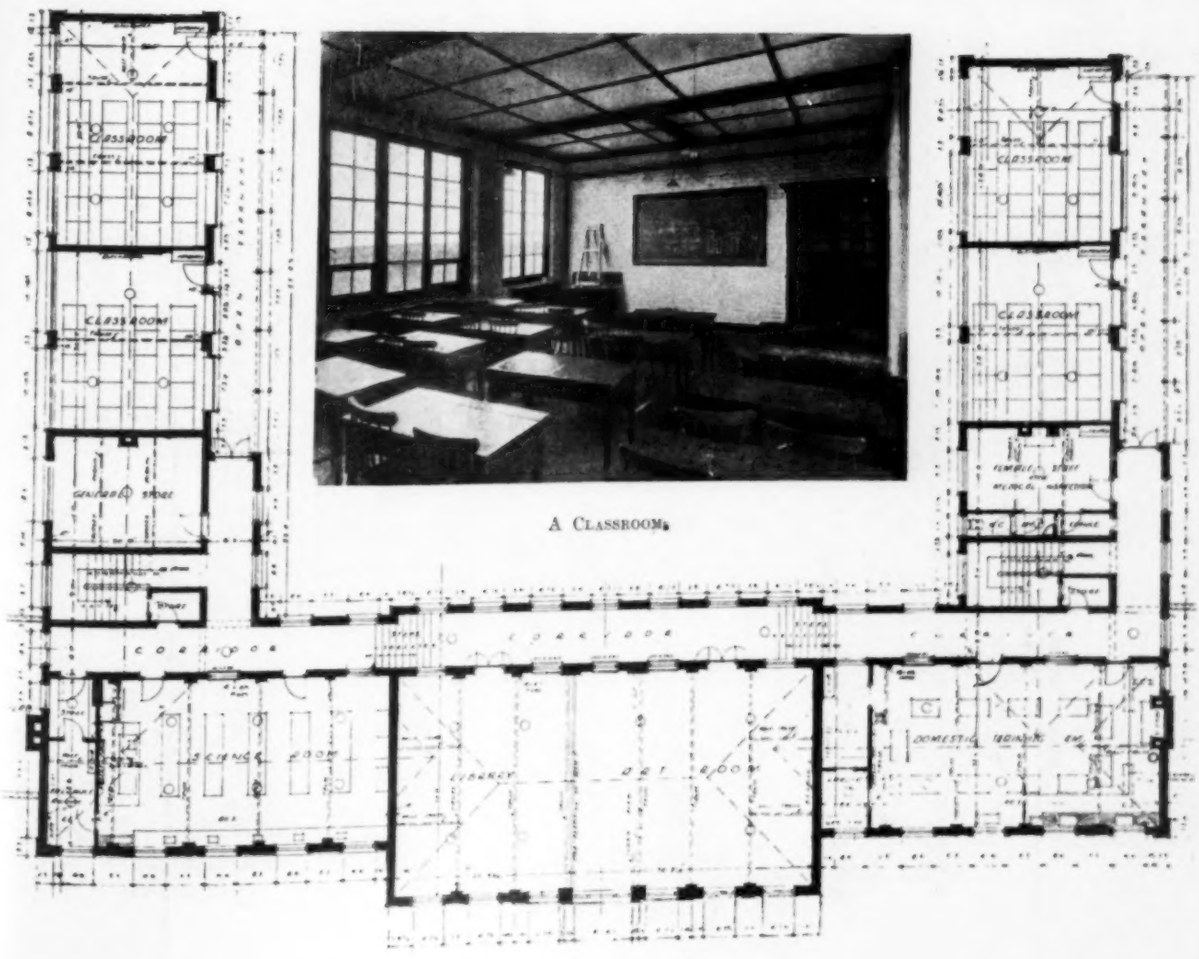
Nonington-Aylesham Central School, near Dover, Kent.

MR. W. H. ROBINSON, F.R.I.B.A., Architect to the Kent Education Committee.



Assembly Hall.

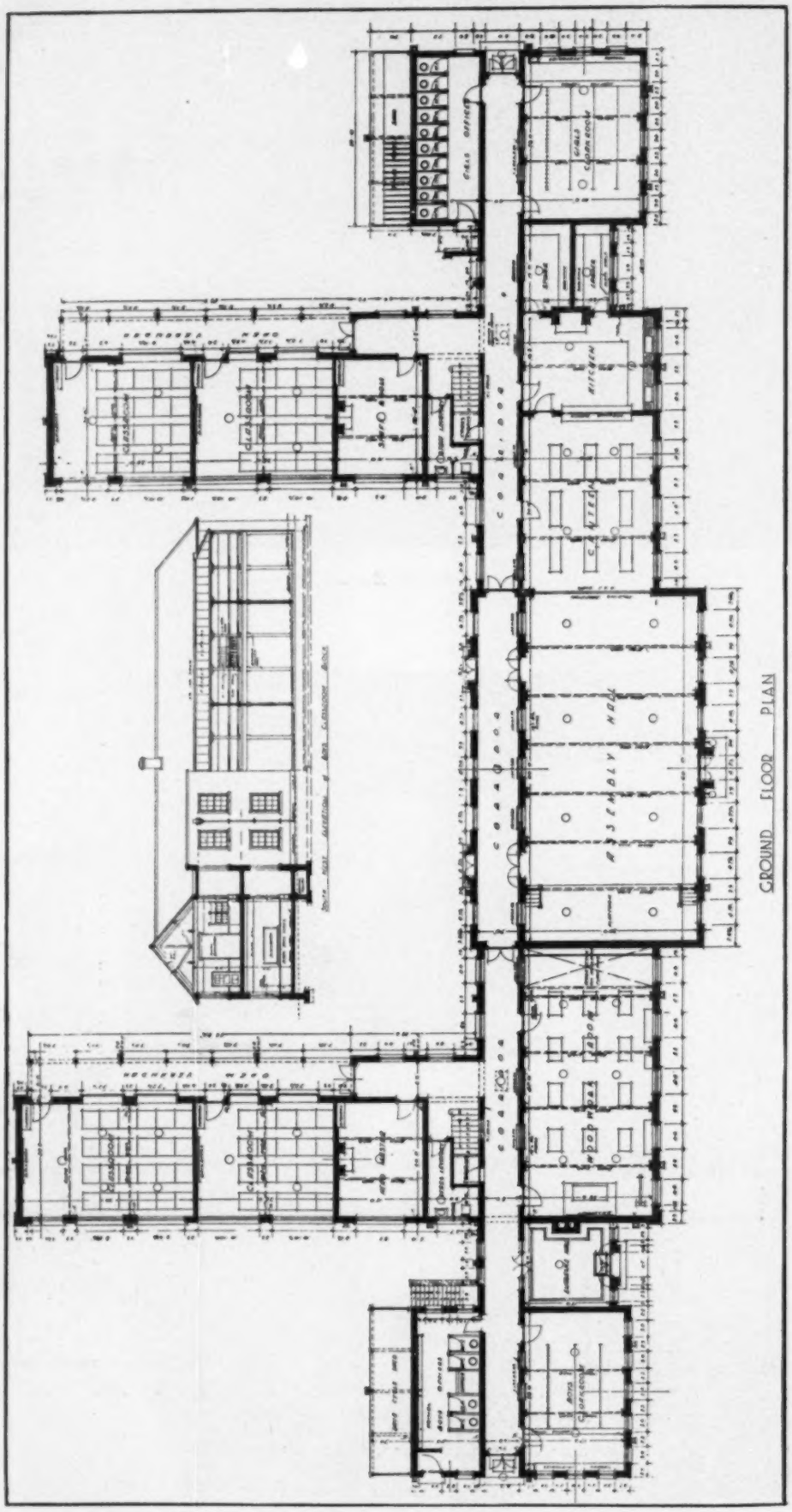
A Classroom.



FIRST FLOOR PLAN

Nonington-Aylesham Central School, near Dover, Kent.

Mr. W. H. Robinson, F.R.I.B.A., Architect to the Kent Education Committee.

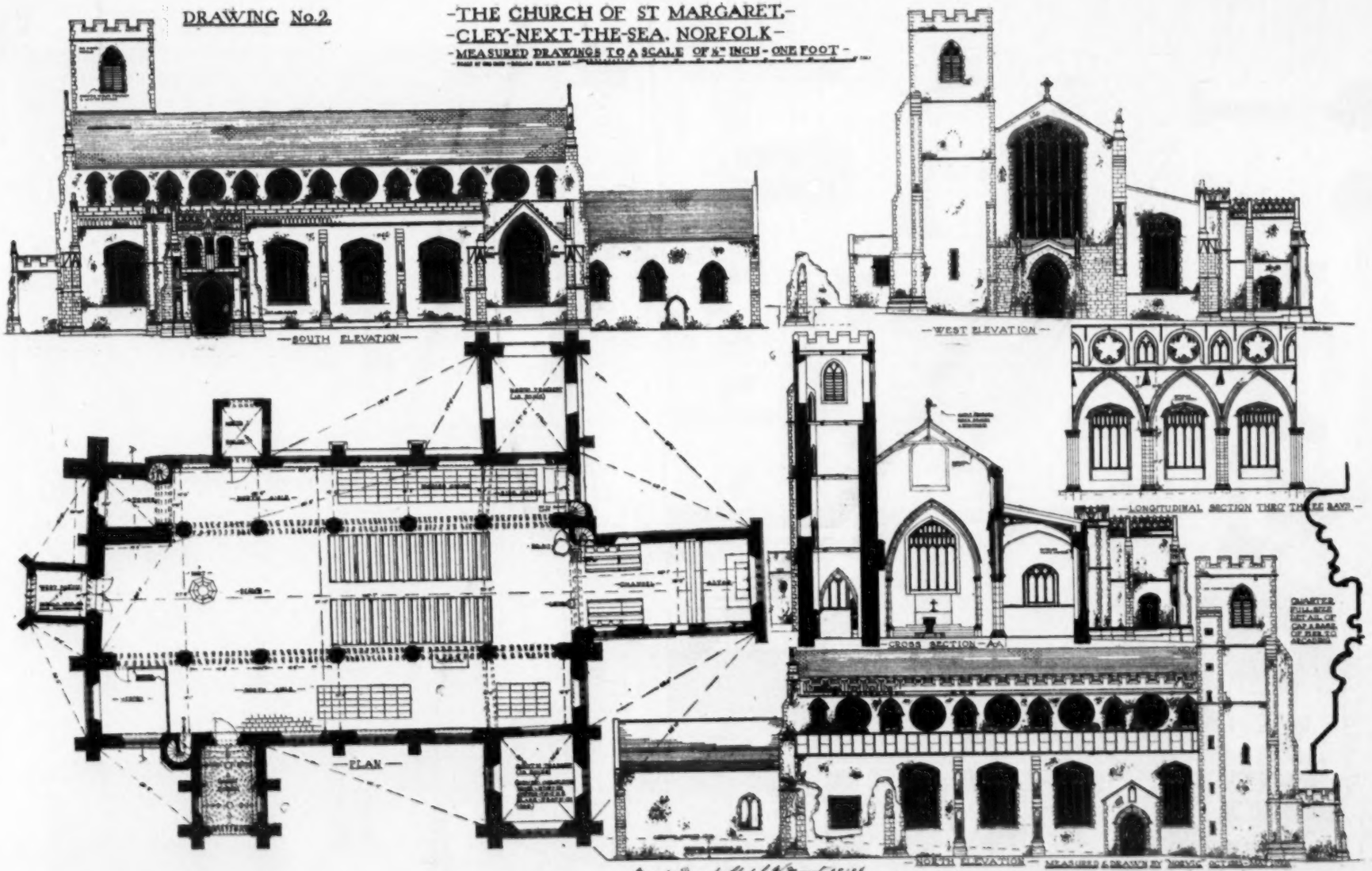


Nonington-Aylesham Central School, near Dover, Kent.

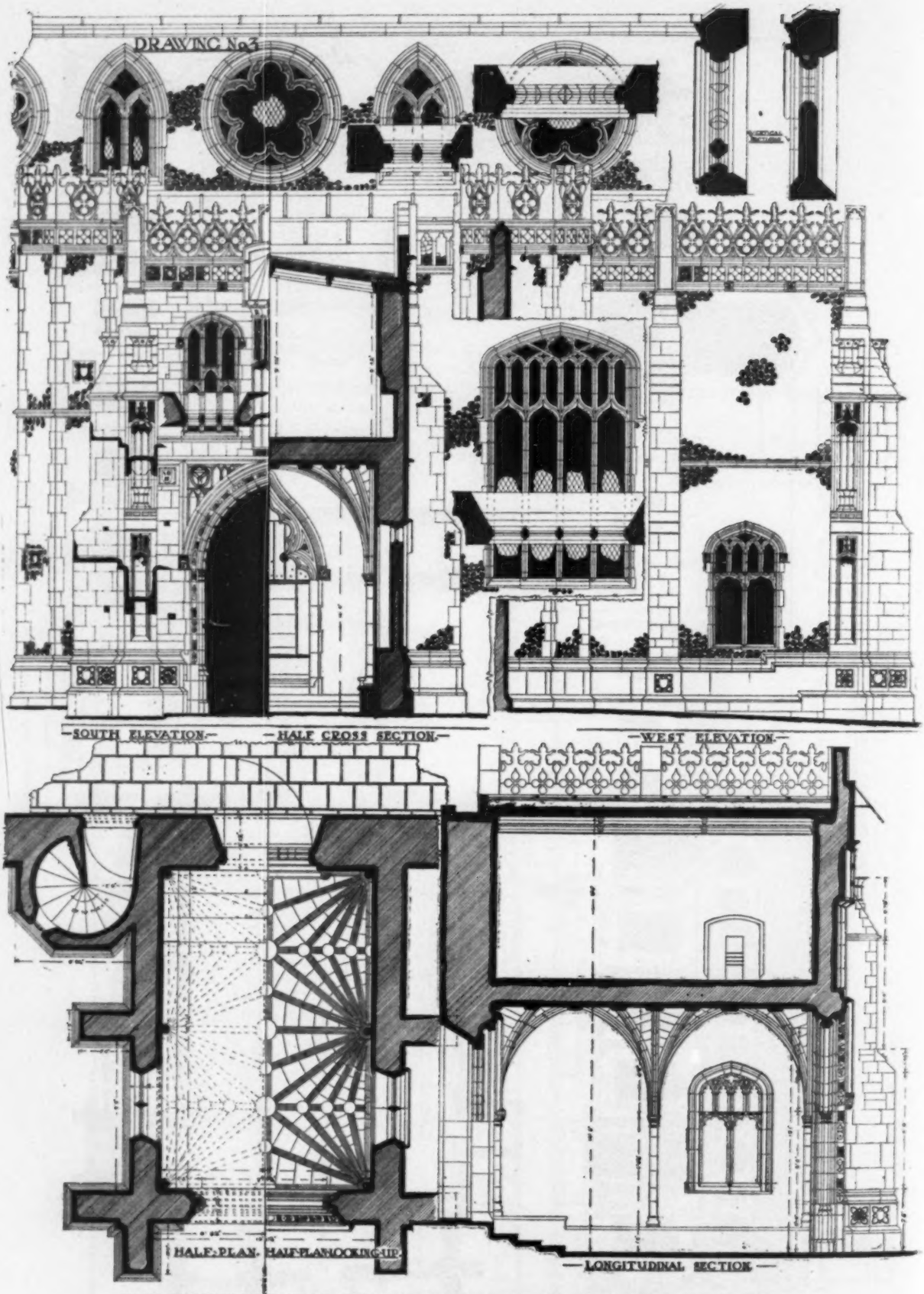
Mr. W. H. Robinson, F.R.I.B.A., Architect to the Kent Education Committee.

DRAWING No.2.

-THE CHURCH OF ST MARGARET,-
-CLEY-NEXT-THE-SEA. NORFOLK-
-MEASURED DRAWINGS TO A SCALE OF ⅛" INCH - ONE FOOT -



Measured and drawn by MR. CLAUDE J. W. MESSENT, A.R.I.B.A.



THE CHURCH OF ST. MARGARET. CLEY-NEXT-THE-SEA. NORFOLK.
HALF INCH DETAILS OF SOUTH PORCH & SOUTH AISLE WINDOW, & CLERESTORY

Measured and drawn by Mr. Claude J. W. Messent, A.R.I.B.A.

R.I.B.A. CONFERENCE AT NORWICH

THE Conference of the Royal Institute of British Architects was held at Norwich in very favourable weather conditions from June 18-21. The headquarters of the Conference were at Stuart Hall, and Sir Banister Fletcher presided. Proceedings opened on the Wednesday night with an informal reception in the Stuart Hall, when members, as guests of the Norfolk and Norwich Association of Architects, were welcomed by the President of the Association, Mr. Stanley J. Wearing and Mrs. Wearing. An admirable programme of music and character studies in Norfolk dialect contributed to the success of an enjoyable evening.

THURSDAY.

Proceedings were opened with an address of welcome by the Lord Mayor of Norwich (Mr. H. Harper Smith), Sir Banister Fletcher (President, R.I.B.A.) being in the chair, supported by the Sheriff of Norwich (Mr. C. Watling), the President of the Norfolk and Norwich Association (Mr. Stanley J. Wearing, F.R.I.B.A.), and Mr. E. T. Boardman (Past-President of the Association).

The Lord Mayor, in his opening speech, said that it had caused him no little surprise to learn that since the foundation of the R.I.B.A., well-nigh a century ago, it had never as a body officially visited the city. Norwich was so rich in architectural treasures, providing such a diversity of buildings characteristic of many centuries' workmanship, that one wondered how they could for so long have foresworn the attractions which he confidently believed awaited them in the ancient city! As Mayor, he welcomed the Institute with a sincerity rendered all the stronger by his firm conviction of the vital importance in the life of our country to-day of the work upon which architects were engaged, to which they brought such a wealth of talent and such whole-hearted interest. Probably there never was a time when the work of the architect assumed such importance in the public eye as it did to-day. The part which architects of the R.I.B.A. had to play in the work of beautifying our towns and preventing the spoliation of our countryside was, of course, indispensable. Architects were the experts to whom laymen looked for advice in all efforts to preserve the treasures of the past, and to ensure that the buildings of this present age became a worthier heritage for generations yet to be.

The President, in his reply, said that he was very pleased to have the opportunity in his inaugural address for this Norwich Conference to thank the Lord Mayor and the civic authorities and others for their kind hospitality and assistance in arranging the Conference, and for providing them with such a fine room in which to hold meetings. It was pleasant to think that the Conference had the civic authorities with it in dealing with the subjects which architects were meeting to discuss. The East Anglian Society of Architects, of whom Mr. Stanley Wearing was President, included within its orbit both the Norfolk and Norwich Association of Architects, founded in 1921, as well as the Suffolk Association of Architects, founded in 1929, and it was to the energy and public-spirited co-operation of these allied societies that the Conference would owe its successful meetings in this ancient and historical city, which had so many and various associations with celebrities in the world of literature, of banking, of art, of painting, of crafts and of commerce, as well as architecture and religion. The citizens of Norwich should keep well in view the desirability of protecting their heritage of ancient buildings and ensure that new buildings should be designed with beauty and built in truth, worthy of the city's great past and its promising future. All would agree as to the beauty and attraction of this ancient city, with its interesting buildings, which appealed to all lovers of the art, and he would like, said the President, to put forward a plea to the people of Norwich to lend their aid and do their utmost to preserve the wonderful old churches, country houses and villages of East Anglia, which once were situated as centres of prosperous industries, but now sometimes suffered from the inevitable migration of mechanical industries to districts of coal and iron. Let us have a care of these buildings which had served well in the past, and, if possible, utilise them for the present.

Mr. Harding Thompson, F.R.I.B.A., then delivered his address on "Regional Planning, with Special Reference to Norwich and Norfolk." After some general introductory remarks, the lecturer, coming to a consideration of the main characteristics of Norfolk, said it was a county, the fourth largest in England, which had so far remained practically untouched by the industrial upheaval of the nineteenth century. Invasions, war and disease had modified but never radically changed the social and economic life of its people, for their stability and independence was founded upon that primary source of wealth—the cultivation of the soil. Norfolk's adherence to the agricultural tradition had saved it from many of the calamities that now threatened the industrial regions, even although the state of arable farming might be at the present time abnormally depressed. Unlike all the home counties, which were becoming increasingly exploited by London's suburbia, Norfolk had retained its independence and individuality and one could still travel across its greatest breadth for 67 miles, and from north to south for 43 miles without passing through anything larger than agricultural villages or small market towns, of which there were such

Photo: A. E. Coe & Sons, Norwich.

THE HEADQUARTERS OF THE CONFERENCE.

Stuart Hall and Suckling House, Norwich (one of the old City Merchant's Mansions).

Restored by MESSRS. EDWARD BOARDMAN AND SON, and presented by the Misses Colman to the Corporation.

charming examples. Nowhere did the land rise to 350 feet above sea level, and hence the county was devoid of "striking" and "dramatic" features that delighted the writers of popular guide-books. Instead we could enjoy in the flesh the scenes so well presented to us by Crome, Cotman, Stark and others of their school. The landscapes of these artists epitomised where words failed the restful charm and beauty of those immense prospects over fen and broadland which were characteristic of this

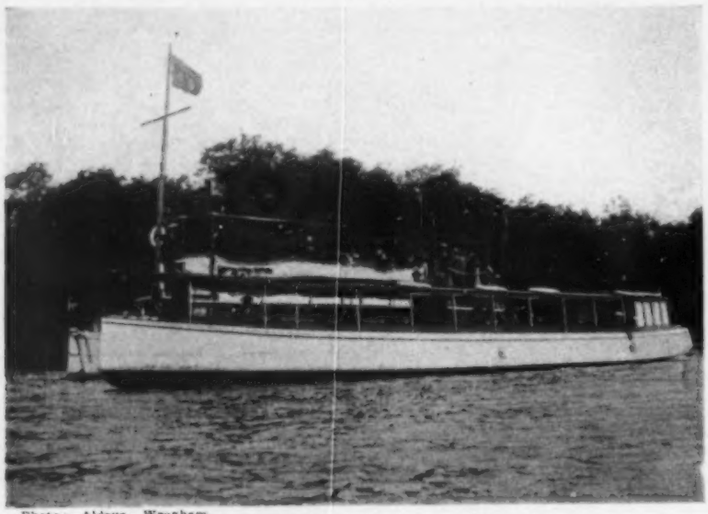


Photo: Aldous, Wroxham.

A Conference Excursion on the Broads.

region: the delightful drawings by Rowlandson, of Norwich and Yarmouth, faithfully represented them as they appeared at the close of the eighteenth century.

The scope of his paper did not permit any detailed information that might result from a survey in all its aspects. It would be sufficient to confine his remarks, firstly, to certain physical features which accounted for the distribution and occupation of the people, and which also determined the position of the chief towns and highways; and, secondly, to geological factors which accounted for the local building materials, and hence affected the character of the architecture.

Roughly oval in shape, the land rose gradually from the Channel coast to a low escarpment in the west and north-west corner. To the west of this higher ground lay the levels of Fenland reclaimed from the Wash, and now providing the richest pastures, yet below sea level for the most part. Part of the north coast was fringed by marshlands, which at Hunstanton gave place to low cliffs of red and white chalk and the so-called "mud cliffs" of Cromer. Bold hillocks 50 or 60 feet high or blown sand like miniature mountains fringed and protected the shores in the north about Blakeney which, with the marshes, formed a natural reservation for bird life.

North-east of Norwich lay that delightful region known as *Broadland*, containing the well-known freshwater lakes, at one time tidal estuaries. How they came into being was significant of the continuous changes in our eastern coastline. There the shingle and sand travelled southwards by tidal action and the mouth of the river Yare had been repeatedly forced in that direction by the accumulated deposits of shingle: so was formed the great natural barrier between the sea and the marshlands, extending from East Caister to the south for five miles. This large area of 1,600 acres had been formed across what was once a large estuary during the Roman occupation. After the last Danish invasion had devastated Norwich at the beginning of the eleventh century, the bank became sufficiently consolidated for a settlement to be made on it and so the town of Yarmouth came into being. It was then separated from East Caister by channels which gradually became choked. As the tidal inlets became more and more restricted, the rivers were embanked during the dry seasons and the surrounding marshes converted into farmlands. The irregular hollows that remained of the old estuary held great sheets of water now well known as the Broads. Although still extensive, such as Hickling (578 acres), and Wroxham (92 acres), they were slowly being silted up by the rivers and reed growth.

Norwich itself undoubtedly owed its origin to its strategic position, at the head of this one-time estuary, for it was defensible by reason of its encircling water except on the west side, where the rivers Wensum and Yare were separated by a ridge of high ground little more than a mile wide. There was good evidence that the site was occupied in Roman times, and quite probably much earlier. The rivers Bure, Yare and Waveney were still tidal for over 25 miles which had naturally influenced the concentration of population in the Norwich district, especially before the advent of railways and motor transport. Including the Broads there were still some 200 miles of navigable waterways.

Springs and water-bearing strata occurred throughout the county and therefore the old village communities were fairly evenly spread over the whole region, but it should be noted that former generations wisely avoided the building of villages on the peat of Fenland, except where patches of silt and gravel occurred. The Fenland villages that now existed were not very ancient.

The variety of the soils in Norfolk and the absence of any minerals as far as could be ascertained had caused agriculture to be the main industry, providing for roughly half the total population, and until quite recently two-thirds of the county consisted of arable land. On the southern boundary around Thetford, one was in a district of primitive heathland which probably caused Horace Walpole to write of the "Wilds of Norfolk."

Out of the total population of some half-a-million, more than half was still fortunately distributed over the rural districts. And it was satisfactory to note that, according to the census returns and estimates of the last twenty-nine years, the total population of the rural districts showed a slight increase. Whether the present depression in arable farming would affect the movement of farm labourers to the towns was still a matter of speculation. The general distribution of population was accounted for not only by reason of the productive arable lands, but also because formerly several of the small market towns and villages between Norwich, Aylsham and Cromer had small industries of yarn spinning and weaving. In a few villages could be seen large windows, partly bricked up, which were for the purpose of giving light to a cottage loom. The Flemish merchants came over from Bruges and the Low Countries, and many of them built houses in Norwich; so we found throughout the eastern districts surviving gable ends reminiscent of Flemish and Dutch architecture, and excellent examples of brickwork. The village of Worstead gave its name to Worsted thread, known all over the Empire; but gradually the village industries were concentrated in Norwich and organised on a more commercial basis.

The inland towns (apart from Norwich) mostly came into existence as convenient market towns serving the surrounding farmlands. Such were Downham Market, East Dereham, North Walsham, Swaffham, Thetford, Attleborough and Aylsham. The provincial markets had declined since the improvement of communications, and Norwich had taken over their function to a great extent.

Some villages arose under the protection of ecclesiastical foundations or feudal strongholds, and of these, Castle Acre, built on a strategic site, by the little river Nar, was one of the outstanding examples. It had a threefold interest for the architect: first, the castle site and a few remains such as the mediæval double gateway which formed the focal point in the delightful approach to the village from the south; second, the village itself with its eighteenth-century cottages built round an elongated green; and thirdly, the ruins, remarkably well preserved, of the Cluniac priory. The late Norman west front was almost intact and the whole group of buildings was in a charming setting.

Of the towns along the coastline extending 100 miles, King's Lynn held a wealth of interest for the architect, and was probably well known to most of those present. In his opinion it was by far the most fascinating town of any in the county outside Norwich. Its former importance in the economic life of the region might be realised from the account of Daniel Defoe, in 1722, who wrote that it had "a vast advantage in trade" with "the greatest extent of inland navigation of any port in England, London excepted . . . By these navigable rivers the merchants of Lynn supply about six counties wholly, and three counties in part, with their goods, especially wine and coals, *viz.*, by the little Ouse, they send their goods to Brandon and Thetford, by the Lake to Mildenhall, Barton Mills and St. Edmundsbury; by the river Grant to Cambridge, by the great Ouse itself to Ely, to St. Ives, to St. Neots, to Barford Bridge and to Bedford; by the river Nyne to Peterborough; by the drains and washes to Wisbeach to Spalding, Market Deeping and Stamford" and so on.

Railways and modern transport had caused Lynn to decline, but the splendid houses of the merchants and the churches were monuments to former prosperity, which was so dependent on the network of navigable waterways in the region. Fortunately, Lynn still benefited by trade with home and Continental ports, and it provided the chief shopping centre for the north-west district.

Of the other coastal towns, Wells, Blakeney and Cley were ancient ports that had lost their trade since the reclamation of the marshlands, but for all that they had retained much of their original character in contrast with the modern seaside resorts at New Hunstanton, Sheringham, and Cromer. To get the real atmosphere of Great Yarmouth, it should be approached from Breydon Water, for then one might recall one's Italian impressions and agree with Ruskin, who, writing of old Venice, said "you may be sure of this much—that for seven hundred years Venice had more likeness in her to old Yarmouth than to new Pall Mall: and that you might come to a shrewder guess of what she and her people were like by living for a year or

two lovingly among the herring-catchers of Yarmouth Roads . . . than by reading any lengths of eloquent history."*

As for the new Yarmouth facing the sea, which catered for summer visitors, he would leave his architect friends to be the critics; he need only say it was by the old quays along the riverside, with their narrow "rows" containing the fishermen's homes that one found the real Norfolk character, for from these came the sturdy crews of the net-drifters and the mainstay of the Norfolk herring fishery.

Having dealt with the geological characteristics of the region, the lecturer said brick, stone, flint and tiles were the traditional building materials of the region; nor must they forget the annual crop of excellent reeds, so skilfully and charmingly worked by Norfolk thatchers that their fame had spread into almost every county of England, for these thatchers had passed on the secrets of their craftsmanship from father to son since the sixteenth century, which might be proved by parish and other records.

Norwich, he continued, dominated its county to a degree seldom found in the capitals of other English counties. This dominance was due to its many attractions —economic, social and ecclesiastical. Moreover, its quite remarkable number of radial arteries linked up the city with the whole region, and these radials were connected by an admirable number of circumferential roads within and without the city boundaries. This "spider's web" road system, together with a clearly defined central open space (the Tuesday Market Place) provided a sound nucleus for all future developments. Also the dual interest afforded by the castle on its artificially crested mound, together with the cathedral, enhanced the silhouette of the city from distant view points.

The intimate connection between Norwich and its satellite towns and villages suggested that no plan for future development, however efficient, should be confined to the existing borough boundaries. Traffic, ribbon development and sporadic building by the speculative builder, did not recognise any such limits except as a boundary line on paper. One had to study for a moment the map showing the excellent system of 'bus services that plied on every radial road from Norwich to realise that all land with road frontage on these routes had a prospective building value. Time and cost factors were more important to-day than mileage in determining the areas where development might take place if land came into the market.

It was essential, therefore, that some control over the region immediately surrounding the city should be obtained as soon as possible by a joint town planning scheme. Such a joint scheme might comprise the county boroughs of Norwich and Great Yarmouth and the rural districts of East and West Flegg, Blofield, Hemstead, Forehoe and St. Faiths. This might be an executive committee under the Act, each local authority having representatives on the committee. The scheme would naturally incorporate the proposals already approved in the preliminary statement for the borough of Norwich, but it was also desirable that the Ministry of Health model clauses on the control of elevations should be included in the scheme. Much of the land in the above-mentioned area was purely agricultural, and it could be "zoned" on the plan as "undetermined" and building only allowed by consent of the authorities, or it might be possible to reach agreement with owners that the land might voluntarily be reserved for agricultural purpose so that the building development might take place round well-defined centres of population instead of straggling out along the existing roads, which was not only wasteful and destructive of amenities, but also reduced the efficiency of the highways for "through" traffic.

The present town planning scheme for Norwich appeared to be admirable as far as it went, but if any further encroachment was contemplated on its agricultural belt it should be borne in mind that extensions of the built-on area beyond that shown on the plan would probably increase the cost per head of population for administrative and other services out of all proportion to the benefits derived from increased rateable values. It might, therefore, be more economical to encourage the growth of the adjacent towns and villages rather than add unduly to the size of Norwich itself, which already exceeded 120,000.

Summary of Suggestions.—For the purpose of defining the points for discussion, he ventured to put forward certain suggestions relevant to the subject of the paper. These were:—

That the preservation of the countryside and towns of Norfolk and their economic development might best be ensured by the following means:—

(1) The formation of a regional committee for the whole county, for the purpose of preparing a preliminary survey and outline plan of the county which would be a guide to local authorities in preparing their individual schemes of development. Such a committee would be of an advisory nature at first and would be representative of all the different interests and authorities.

(2) By the formation of statutory joint town planning committees to prepare schemes under the Act for:

(a) The Norwich region, including Great Yarmouth.

(b) King's Lynn and neighbourhood.

(c) The Sheringham-Cromer area.

(3) By the inclusion of all schemes of the existing powers for the control of elevations, thus preventing undesirable building and encouraging the use of local and harmonious building materials.

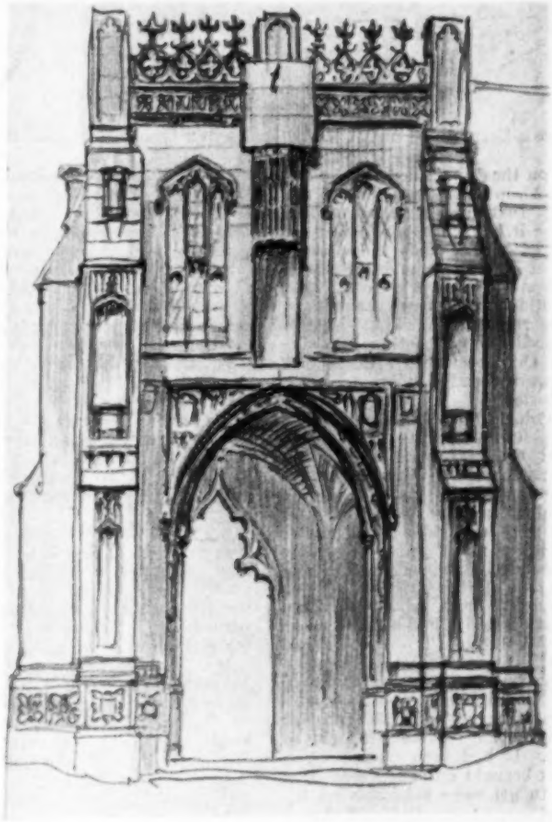
(4) By county and borough councils making full use of their powers under Section 11 of the Petroleum (Consolidation) Act, in controlling the position, design and colour of petrol filling stations; also their powers under the Advertisement Regulation Acts.

(5) By the formation of a county branch of the Council for the Preservation of Rural England, whose particular function would be to report to those in authority all cases of threatened disfigurement. This branch should be of great assistance to the planning authorities in recording areas of special landscape beauty and all buildings of historic and architectural interest.

(6) By the local athorities making use of the R.I.B.A. advisory panels of Norfolk Architects to assist them in adjudicating on elevations of buildings submitted for approval under a town planning scheme.

Conclusions.—In conclusion, he would call the attention of all those who would be responsible for planning the region, to an extract from the memorandum issued by the Board of Agriculture in 1926, which read: "A national agricultural policy should aim at securing the two following objects: (1) that the land should yield the highest economic possibilities in the way of food for the nation. (2) That it should furnish a basis of life and a reasonable livelihood to the greater number of people."

It must be emphasised that the term "Town Planning," did not mean the urbanisation of rural districts, but the utilisation for the purpose to which they were best suited. During the next few days they would see how the past life and history of Norfolk were visibly expressed in the architecture of Norwich and the surrounding region; spacious country mansions,

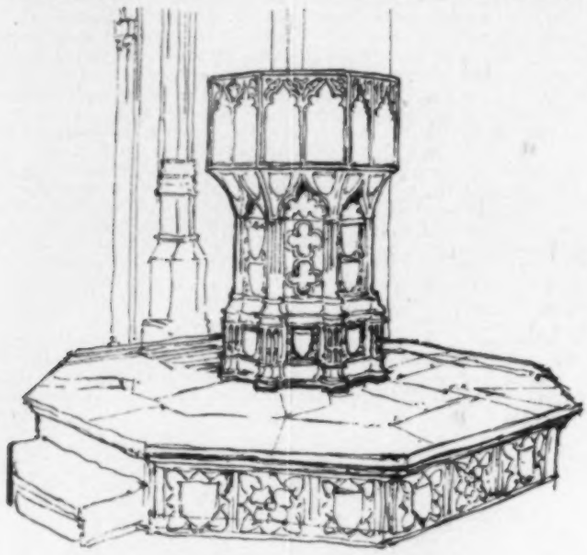


South Porch, St. Mary's Church, Cley-next-the-Sea.

From a Sketch by Lieut.-Col. H. P. Cart de Lafontaine, A.R.I.B.A.

* "St. Mark's Rest," by John Ruskin.

whose owners for generations had been engaged in agriculture; delightful farms and cottages that came into being by unconscious artifice in the logical use of local materials; dignified town houses which suggested the growing wealth and the urbane fashions of the eighteenth century, and particularly the excellent examples of church buildings that recorded the continuity of effort and zeal of Norfolk men. Set against a background of agricultural England they constituted a precious heritage well worthy of study and preservation.



The Font, Cawston Church.

From a Sketch by Lieut.-Col. H. P. Cart de Lafontaine, A.R.I.B.A.

A discussion on the paper then followed.

Mr. Rodney Alsop (Vice-President of the Royal Victorian Institute of Architects), in conveying to the R.I.B.A. the good wishes of the Institutes he represented—the Australian Institute of Architects and the Royal Victorian Institute—said that they felt that these meetings did more for them than almost any other thing the R.I.B.A. did. They appreciated the good feeling meetings like this promoted, and the experience of centuries of tradition that the Old Country was able to put before them.

Mr. E. G. Cohen (Past-President of the Royal Institute of Architects of Western Australia) said that town-planning conditions in Western Australia were very different from those existing here. They had full provision made in their Act to deal with built-up areas. He understood that under the English Act for many years town planners were severely handicapped by reason of not being able to deal with buildings already built. He thought, from what had been heard, that that disability had been removed.

Mr. Gordon West (Hon Treasurer, Royal Architects' Institute of Canada)told the meeting that he felt very much at home, for he had just left Toronto in the throes of a controversy on town planning, and a big municipal election had just been fought on town planning. It had been interesting to hear the subject brought up at the conference and he hoped to get some sidelights on it.

Sir John Sulman (Australia) said that it was now realised that, throughout the Continent of Australia, town planning was a necessity for the proper development of towns and regions. He congratulated English town-planners, for they had got, not only the Town Planning Act of John Burns, but had revised it to meet difficulties as they arose. In his own State of New South Wales they had not got an Act at all yet. He would like to say a few words in regard to the very able and lucid and most interesting address by Mr. Harding Thompson. He had given to him (Sir John), as a stranger, a general idea of the country which one could not have got otherwise, its physical conditions as well as its artificial conditions and the buildings and roads that would guide one in forming the regional plan that was being contemplated. There was one point in regional planning which had struck him as a difficulty that had got to be met. By-pass roads being such fine roads, the frontage was jumped at by commercial firms, who put up factories and were spoiling the countryside.

Mr. C. H. Strange spoke of the work being done in the south-eastern part of England, where, in connection with the local Allied Society, there were being formed advisory panels of architects for local town-planning committees. They could not do very much but they did see some of the terrible bungalows and other buildings which were proposed to be built, and were able to make suggestions which they found were actually adopted, and readily adopted, by the builders or owners, and in that way they were able to exercise a certain amount of improvement in the buildings that were put up.

Mr. Stanley C. Ramsey said that one of the things that had spoiled England was the work of the speculative builder. The latter was not an unregenerate person—he had, said the speaker, great hopes of him in the future—but the point about even the best of his work was the deadly dullness of it, because his buildings were not of a regional character.

Mr. H. C. Hughes said that he thought that a definite danger of panels was that too much attention might be given to regional architecture, and admirable, sympathetic modern work was sometimes discouraged and turned down. That was a danger the panels would have to guard against.

Mr. Francis Hooper suggested, in regard to ribbon development, that an economic explanation for the custom was that in some of these really wonderfully fine arterial roads temptation was created by the road frontage. Would it not mitigate, or, at any rate, simplify matters, he asked, if the powers existing could, at definite intervals, subsidise byways and sideways?

Mr. T. Rayson said that there was no doubt that the results of persuasive efforts on people who wished to build were proving highly satisfactory, at least in certain districts. It was quite certain, too, that unless the desire for sane buildings came from the people who wanted to build, no amount of compulsion would obtain the desired result. He would recommend one thing on the part of the advisory councils—that they should never turn down a scheme proposed unless they had two things: one was to give perfectly adequate reasons for turning it down, and the other was to suggest a desirable substitute.

Professor Abercrombie said that there was an interesting suggestion put forward which might be considered. There were large areas afforestated in the neighbourhood of Thetford. He gathered that the land was not of a very high value from the agricultural point of view. The suggestion was that something might be agreed in conjunction with the Forestry Commission in afforestating open spaces, such as were obtained in the great State forests abroad. One might approach the Forestry people and ask them to leave avenues or footpaths.

Mr. J. A. Kidd said that he would like to see Norfolk regional planning extended to the agricultural land. He would like to see that extended as far as Yarmouth, for in these days of quick and rapid communication one would soon have people living on the banks of the Broads, as they were doing now to a small extent.

Mr. R. B. Walker (Nigeria, West Africa) remarked that authorities realised now fully (which they had not always in the past) that the subject of town planning covered a far wider field than providing for the mere building-up of areas.

Mr. T. B. Wightman (Past-President, Queensland Institute of Architects) told of what was being done in Queensland. They had registration of architects there now. They also had a Greater Brisbane scheme in which they were amalgamated with four towns and a dozen shires, so that Brisbane was probably one of the biggest towns in the world. The City Council was administered by one town clerk, one city engineer, one city architect, and one city planning officer. It is four years since the scheme was consummated, and it was the latter's job to prepare a comprehensive plan of the city and plan the whole area in such a way that it was cut into business, residential and trade sections, with special provisions made for noxious areas. Ultimately the idea was to get into these noxious areas trades which are a nuisance in residential districts. They were rather suspicious in Queensland of voluntary committees that adjudicated on plans. They had to submit them all to a professional man appointed by the City Council, and architects, in submitting plans to the City Council, had not only to get them approved by the city architect, but also have them approved by the city engineer and the town planner.

Mr. Stanley J. Wearing (President, Norfolk and Norwich Association) said that control of elevations which were appearing and were about to appear on our countryside roads and lanes was a most desirable thing to attain, but it was one that appeared most extraordinarily difficult to attain. Mr. Strange had told the Conference how he did it—that he and another architect attended at some Council Office to see plans which were deposited. One could foresee very nearly having to close one's office doors to attend to this voluntary labour. This did not mean that they would not struggle to realise those ends, but the many extraordinary difficulties involved were obvious. Some such control would have to be adopted in one way or another if we were to help in beautifying buildings which were cropping up on all hands. The local Association had been approached about it and had expressed its willingness to do what it could.

The President then formally moved a vote of thanks which was accorded with enthusiasm.

Mr. Harding Thompson, in his reply, referred to Mr. E. G. Cohen's questions, and said that it was quite right the Town Planning Act of 1925 did not give power to plan built-on areas, with a very few exceptions where it was necessary to do so to make the scheme more or less official, and also if the building was of historic interest. Sir John Sulman had questioned as to how we could avoid the development. He thought Sir John would find the best answer to that in the First Annual Report

of the Greater London Regional Committee, of which the President was Chairman. It was mainly to be avoided by means of town-planning measures, as suggested by Dr. Unwin in his Memorandum.

The first proceeding after lunch was the Conference photograph.* Members and their parties assembled for this at St. Andrew's Hall, after which a choice of five visits to points and buildings of interest in the city had been arranged. These visits, each of which was in conjunction with architect guides, concluded with tea, which was taken at Carrow Abbey—by invitation of the Misses Colman—and at Crown Point—the residence of the Lord Lieutenant of Norfolk, Mr. Russell J. Colman. At the latter house, opportunity was taken to inspect the Lord Lieutenant's collection of works by the Norwich School of Painters, by "Old Crome," Cotman, Thirtle, and others. The hospitality in such charming surroundings of the Misses Colman and the Lord Lieutenant was much appreciated.

In the evening, a close was brought to a memorable day with a reception, at the Castle Museum, by the Lord Mayor of Norwich and the Lady Mayoress, at which members of the Conference were afforded the pleasure of meeting the Corporation and other well-known citizens of Norwich. Members had the welcome opportunity of viewing the museum and seeing further examples of the paintings of the Norwich School. The Castle had been specially illuminated for the occasion, and light refreshments were provided and music and dancing much enjoyed. The evening came to a close about 11 p.m.

Friday.

The Friday was devoted to a number of whole-day visits which, attended by beautiful weather, were greatly appreciated by members. Tour No. 1, under the guidance of Mr. Cecil Upcher, F.R.I.B.A., was to Cawston Church, Sall Church and Blickling Hall, lunch being taken at Aylsham. Tour No. 2 took in Melton Constable Hall, Binham Priory, Blakeney Church, Cley Church and Salthouse, lunch being taken at Blakeney and tea, by kind invitation of Mr. and Mrs. S. Cozens-Hardy, at Letheringsett. The guide on this tour was Mr. Basil Cozens-Hardy, B.A. Tour No. 4, under the guidance of Mr. F. H. Swindells, A.R.I.B.A., visited East Barkham Hall, Raynham Hall, Castle Acre Priory and Swaffham, where tea was taken. None appears to have been more popular than that of the Broads, which was attended by 60 or 70 visitors. The day was somewhat overclouded, though the sun struggled through for a time, but there was a refreshing breeze, and the outing was not marred by bad weather. The party, which included the President (Sir Banister Fletcher), was under the leadership of Mr. A. G. Berry. It was planned that the visitors should be taken to Wroxham by motor-coach, but this part of the journey was broken by a halt at Rackheath Park, through which, by permission of Sir Edward Strachey, the party proceeded on foot. They were afterwards received at Rivercroft, Mr. and Mrs. H. L. Clark's residence on the Bure, and from there they were conveyed to Wroxham Broad on the large passenger motor-launch "Princess Mary." A regatta, promoted for the occasion by the Yare and Bure Sailing Club, was held on the Broad, and the passengers were transferred to the club houseboat. The visitors were joined on the Broad by the Lord Mayor and Lady Mayoress of Norwich (Mr. and Mrs. H. Harper Smith), and, as Commodore of the club, the Lord Mayor officiated as officer of the day, assisted by Major D. G. Astley.

THE CONFERENCE BANQUET.

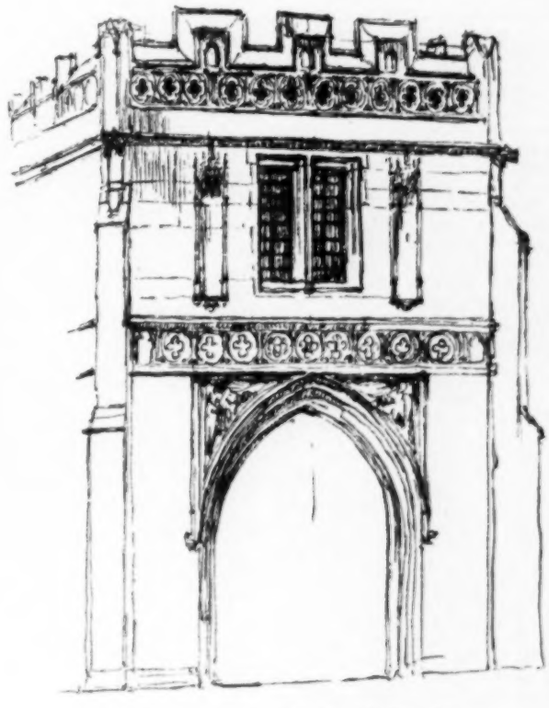
The Conference Banquet was held in St. Andrew's Hall on the Friday evening, with the President in the chair, supported by the Lord Mayor of Norwich, the Very Rev. the Dean of Norwich, the Sheriff of Norwich, the High Sheriff of Norwich, and the President of Norfolk and Norwich Association of Architects (Mr. Stanley J. Wearing).

Amongst those present were:—Professor Patrick Abercrombie, Sir John Sulman, the Mayor of Thetford, Major S. H. Warren, Messrs. Rodney H. Alsop, E. H. Buckingham, J. S. Bullough, J. W. Bunting, R. G. Carter, J. A. Christie, E. G. Cohen, Grahame Cotman, Herbert A. Cox, A. Cozens-Hardy, J. H. Dain, T. Raffles Davison, J. L. Denman, G. Hastwell Grayson, F. G. Hicks, Francis Hooper, E. R. Jarrett, Arthur Keen, S. D. Kitson, H. J. Leaning, Frank Lishman, R. G. Lovell, C. J. Messent, T. R. Milburn, H. Greville Montgomery, R. H. Mottram, W. T. Plume, S. C. Ramsey, Noel B. Rudd, E. W. B. Scott, G. J. Skipper, W. R. Smith, F. H. Swindells, Wm. B. Taylor, E. J. Tench, W. Harding Thompson, Laurence Turner, Cecil Upcher, H. J. Venning, T. B. M. Wightman, Victor Wilkins, F. R. Yerbury and Ian MacAlister, Secretary.

After the loyal toasts had been honoured, Mr. Sydney D. Kitson (Hon. Sec., R.I.B.A.) proposed "The City of Norwich." He said that, speaking in this hall nearly a hundred years ago on the occasion of a dinner in honour of the patron saint of wool-combers, the Norwich artist, John Sell Cotman, described his native place as "this fine old city, venerable in its various remains of antiquity and beautiful in its surrounding scenery, scarcely to be equalled in its quiet way by any city in the British Empire." As an appreciative stranger, speaking in this same hall nearly one hundred years later, with those same portraits of the Norfolk worthies looking down from the walls, it seemed to him that Cotman's claim was justified to-day and that the intervening years had merely added to the interest and charm of Norwich, whose cathedral equalled in architectural interest any other cathedral in England. The fine grand castle seemed to have been designed with a particular vision, which was rare even among architects, eight hundred years ahead as a perfect setting for the reception which the members of the Conference had the night before been privileged to attend. The mediæval Guildhall and the old churches with their exquisite flint work which met one at every turn were a delight to the eye. In concluding, therefore, he would endorse, on behalf of his colleagues and himself the words used by Queen Elizabeth on her visit 350 years ago to the city, "Master Mayor, I have laid up in my breast such good will to your city in that I shall never forget Norwich."

The Lord Mayor of Norwich (Mr. H. Harper Smith) responding, said that it was not only of Norwich's antiquities that they were proud. He then proceeded to give a brief summary of some of the amenities of the city, and finally referred to the excellent work which was being done by the members of the Norfolk and Norwich Association in Norwich. The work which they had accomplished in this city and also in other places represented a very fine achievement. As a practical expression of their interest in, and enthusiasm for, the preservation of historic Norwich, they took an active part in preventing the demolition of some houses in that most picturesque corner of Norwich—Elm-hill. In 1926, Mr. A. R. Powys, the Secretary to the Society for the Protection of Ancient Buildings, and an Associate of the Institute, lectured in Norwich on "The Harmonious Development of Ancient Buildings," during the course of which he urged the citizens to press for the restoration of the Elm-hill houses. Being a practical man he was armed with particulars regarding cost, and showed that it would be considerably cheaper to repair the old houses than to demolish them and build new houses on the site. Fortunately, by the co-operative efforts of the Norfolk and Norwich Association of Architects, the Norfolk and Norwich Archæological Society, the Norwich Society, and other interested people, the Elm-hill property was saved, and a considerable sum of money was expended in restoring the houses. So it was that Elm-hill remained for to-day as one of the best specimens still existing of a mediæval street.

The Lord Mayor was then handed the following message, which he read to the company:—"On the occasion of the Conference of the Royal Institute of British



Wymondham Church, South Porch.

From a Sketch by Lieut.-Col. H. P. Cart de Lafontaine, A.R.I.B.A.

* The group photograph was given in our Norwich issue last week.

Architects at Norwich, the following resolution was proposed by Mr. T. R. Milburn and seconded by Lt.-Col. H. P. Cart de Lafontaine (members of the R.I.B.A. Council) in the Strangers' Club, Elm Hill :—'That a cordial vote of thanks be accorded to the City Authorities, the Architectural and Archæological Associations of Norfolk and Norwich and their supporters, for the foresight and ability with which these mediæval buildings have been preserved from destruction and worthily reconstituted so as to form one of the main attractions of the city.' This resolution was carried by a large company by acclamation and with instructions that a copy should be forwarded to those interested."

They were glad, said the Lord Mayor, to have had the opportunity of welcoming the R.I.B.A. to their city; they trusted that the Conference had been both pleasant and profitable, and they hoped that Norwich had maintained that reputation for hospitality to the strangers within her gates which throughout her long history she had constantly upheld.

The Sheriff of Norwich (Mr. C. Watling) also replied to the toast. He endorsed the Lord Mayor's remarks, but asked the company not to regard Norwich as an architectural museum wherein the citizens slumbered till awakened by a chorus of admiration from American tourists. The city had modern factories, housing schemes equal to anything of their kind elsewhere, spacious ornamental parks and garden grounds, and some day, it was said, they would have some new streets. Norwich citizens were sorry that the Conference was a little too early to see what would be the finest block of municipal buildings and town hall in England.

The Very Rev. the Dean of Norwich (Dr. D. H. Cranage), in submitting the toast of "The Royal Institute of British Architects, and the Allied Societies," referred to the origins of the cathedral. It was originally the Church of Dominican Friars, the preaching Friars. The Eastern part was the place where they used to hold their daily service and the great nave was their preaching-place. On the question of the preservation of old buildings, he would like to put two serious points. The first was an archæological one and the second was purely an architectural one. The archæological one was this: what were we to do with the fine old churches in cities which were not required? One could not turn all of them into suitable halls, into Chapter Houses as an old church near London Bridge had been turned into for the Chapter of Southwark. Was it possible, was it wrong architecturally or archæologically, for it to be removed? And the second one was this: He would like the Royal Institute and the Allied Societies at some time to consider whether, in every respect their rules of competitions were wise. He would give concrete instance to drive home the point. He had the great honour a few years ago at the University of Cambridge of serving on a syndicate which was commissioned to get plans for the new University library. The question came to competition. It was naturally felt that here was the greatest chance of the whole century and the greatest possible pains must be taken to get the right man. Was it right to put the whole responsibility on one person? The possibility of competition was considered, but it was found that it would be necessary to have a professional assessor or assessors and to go by his or their opinion and either to have to employ the one chosen or scrap the whole thing and have another. With a previous president, a much revered man whom all knew in the Institute, he, the speaker, had a long conversation on the point. He said: "Surely there would be nothing against architectural etiquette if the assessors were to choose three out of the designs and say to the University: 'With our permission you can employ any one of these three.'" He was not going to argue the point in this way, but it was such an important point that he would like the Institute to take it into account.

The President, responding, said that Norwich was a most delightful centre for a meeting of architects, an ideal meeting-place, and he felt sure that the members considered that the meetings there had been a great success. He had been much impressed by what the Dean had said about preserving ancient buildings, and he did think Norwich might say it had set an example to the whole of England in preserving the buildings which had come down from the past. The preservation of those old buildings was of commercial value to the community. It drew people from all parts of the world to these old historic cities. Architecture had an absolute commercial value and it was most wrong, in his opinion, that any old building which could be put to useful purpose should be destroyed. With regard to the future, Norwich had a great future to deal with. The authorities had the regional planning of Norwich and District well in hand and he hoped that that aspect of architecture —which was a most important one nowadays —would be dealt with by the Lord Mayor and the City Council in the way that they had dealt with the buildings which they already retained. There were other matters which, if he had further time, he might deal with. The Institute itself was in the throes of a competition. There was going to be a competition for the headquarters of the Royal Institute, and it was not going to be a very easy matter, as the Dean would probably be aware. But the Institute was at the present moment selecting assessors and in the course of time the competition would be properly launched. In concluding, the President expressed the gratitude of the Conference to the civic authorities and those private persons who had so generously extended hospitality, and mentioned particularly the debt the Conference owed to the President of the Norfolk and Norwich Society of Architects and the honorary secretary of the Conference, Mr. Eric Scott.

Mr. Stanley J. Wearing (President of the Norfolk and Norwich Association of Architects) also responded. After speaking of the 49 Allied Societies of the R.I.B.A., he trusted that he would be forgiven, if he addressed himself particularly to the local one, the Norfolk and Norwich Association of Architects, which with the Suffolk Association formed the East Anglian Society. The Association was formed in 1920 and the first annual report showed a membership of 19 and a total expenditure for the year of £3 17s. 9½d. Their numbers had now grown to 79. They had been fortunate in their start to have a man like Mr. Edward T. Boardman to take the helm, and Mr. E. W. B. Scott to act as honorary secretary, and too much praise could not be given to those two gentlemen in guiding the Association's destinies.

Mr. Edward T. Boardman proposed "Our Guests," and coupled with it the name of Sir Bartle Frere, the High Sheriff of Norfolk. Sir Bartle H. G. Frere responded.

Saturday.

The Conference drew to a close on Saturday with a number of visits—to Great Yarmouth, to Wymondham and Hingham, to Norwich Cathedral, etc.

Proposed New Nile Barrage.

It is learnt that the Egyptian Government intends shortly to invite tenders for the remodelling of the Asyut Barrage across the Nile in Upper Egypt. The works will comprise the building of about 200,000 cubic metres of masonry, mainly in the form of additions to and extensions of the sub-structure of the Barrage. An additional lock will also be built and new sluice and lock gates will be erected to replace those now existing. Tenderers may quote for either or both the masonry and the ironwork of these works. The drawings, contract, and specifications are now being drawn up and can be inspected towards the end of June at the Reservoirs Department of the Public Works Ministry, Cairo, Egypt, and at the office of the Consulting Engineers, Sir Murdoch MacDonald and Partners, 72, Victoria-street, London, S.W.1. A visit to the site before tendering by a competent engineer representing the tenderers will be one of the stipulations precedent to the acceptance of a tender.

THE WEEK IN PARLIAMENT

WESTMINSTER, Wednesday.

Steel Frames in Buildings.

Mr. A. M. Samuel asked the Minister of Health whether his department laid down any regulations as to loads to which steel frames in buildings might be subjected; whether he was aware that steel frames were allowed by some local authorities to carry loads or stresses which were prohibited by other local authorities, although steel frames of the same quality, strength and design were used in both cases; and whether he would recommend local authorities to adopt uniform regulations applicable to identical conditions?

Mr. Greenwood said that the position outside London was that the use of steel framing in almost all the large urban centres was subject only to a by-law requiring due stability and proper construction. The actual practice of local authorities was now under investigation by the Department of Scientific and Industrial Research in a number of areas. In the light of that investigation he proposed to consider the possibility of suggesting to local authorities some working guide in deciding what was necessary to secure due stability.

Mr. Samuel then asked the Minister whether he would arrange for the Steel Frame Act of 1909 to be examined by scientific authorities for the purpose of revising its provisions rendered obsolete by the improvements in steel-making since 1909, so as to correct building regulations under the Act, which were now so out of date that local authorities frequently waived them?

Mr. Greenwood replied that the Building Research Department had set up a committee to review, among other things, present methods and regulations for the design of steel structures. The Act of 1909 was a London County Council Act applying only to London, and it rested with the County Council to propose to Parliament any measure for bringing it up to date. The County Council had express power in that Act and the Act of 1923 to waive its requirements in so far as they related to iron and steel construction. He was communicating with the County Council on the subject.

Mr. Samuel further asked the Minister whether he would revise the 1915 regulations governing the use of reinforced concrete so that they might be applicable to the increased strength of cement developed in the last fifteen years; and, if not, whether he had any information about the action which local authorities were taking to bring their building regulations up to date in relation to the use of reinforced concrete?

Mr. Greenwood said that the regulations of 1915 were regulations made by the London County Council, and it rested with them to propose their revision. The County Council obtained power in an Act of 1926 to waive any of the requirements in the regulations, and he was in communication with them on the subject. Outside London the use of reinforced concrete was normally controlled by by-laws, which had almost everywhere been brought up to date. As a rule, they contained only a simple requirement that a wall built of reinforced concrete should be of sufficient thickness to secure due stability.

Proposed Ice Rink, Streatham.

It is reported that work has been commenced in clearing the site for the Streatham Ice Rink, which is to be erected on the site of the old Streatham Constitutional Club near Streatham Station. Building operations will shortly be begun, and the promoters hope to have the building ready to open to the public by December of this year. The building is estimated to cost something in the neighbourhood of £70,000.

LEGAL SECTION

NOTES ON CURRENT CASES

De-Rating Garages Used for Motor-car Repairs.

Two cases have recently been decided by a Divisional Court—Revenue Officer Barnsley *v.* Eyre Bros, Ltd., and Revenue Officer Middlesborough *v.* Middlesborough Assessment Committee (*The Times*, June 6), in which the majority of the Court have held that garages used for the repair of motor-cars may be entitled to be de-rated under the Rating and Valuation (Apportionment) Act, 1928, and that in the circumstances shown in these two cases they were not excluded by reason of "being premises used for the purposes of a retail shop" within section 3 of the Act. We put it thus, because the Court expressly pointed out that it did not follow that all garages were entitled to be de-rated, as each case must be decided on its particular circumstances.

On the Case as stated on appeal in the first of the two cases there was some inconsistency, but it was agreed at the hearing that the following facts were those to be accepted, as stated in paragraph 10 (1) of the Case. "The Market-street premises occupied a floor space of 590 square yards, of which about 520 square yards were used for the repairs of cars, and the storage of cars undergoing or awaiting repairs, and about 70 square yards for the storage of spare parts and accessories needed for repairs, a mess-room for workmen and for accommodation of two motor-spirit pumps."

Across a private street there were other premises used as a central office and a sales shop for motor accessories, and there were other premises in different parts of the town, but the Court held that under section 3, sub-section (3), the premises used as offices and a sales-room were not used as parts of a single factory, and that the real point in this case was whether the premises described in paragraph 10 above were or were not primarily occupied and used as a retail shop. The Assessment Committee had held that the premises were an industrial hereditament, but on appeal to Quarter Sessions they were held to be occupied and used as a retail shop, and this was an appeal from this latter decision. Section 3, sub-section (1), enacts that the expression "industrial hereditament" does not include a hereditament occupied and used as a factory or workshop if it is primarily occupied and used . . . " (b) for the purposes of a retail shop." In sub-section (4) "Retail shop" includes any premises of a similar character where retail trade or business (including repair work) is carried on."

The majority of the Court, according to the only judgment at present reported, turning first to the general expression in paragraph (b) of the sub-section indicated that a retail shop was a shop where buying and selling in small quantities was carried on, and although exceptional cases might be cited, in the overwhelming majority of cases there were certain physical characteristics of shops distinguishing them from houses or from factories and workshops, and the window and counter were referred to by way of illustration. Then as to the expression used in sub-section (4) it was laid down that "premises of a similar character" must mean premises resembling a shop in physical attributes. It was, however, pointed out that there were also the difficult words to construe "including repair work" in sub-section (4), but the interpretation put upon those words was that they included only such repairs as reasonably fell to be included in retail trade in a retail shop, and an illustration was given: A ship-repairing yard was not a retail shop, because it was not a shop, or premises of a similar character, nor were the repairs there executed such as would be performed in a retail shop, but a cobbler does repairs in what in ordinary language would be deemed a shop, and the Court considered that the words had been introduced in the Act to deal with cases of the latter kind. On the circumstances of this particular case, therefore, the Court allowed the appeal and held the premises to be an industrial hereditament.

The second case was much the same as to the facts; the greater part of the premises were used for repair work though there was a small showroom which was little used, as no cars for sale were stocked, but if a car was sold it was obtained from another distributor on commission. Cars were garaged, but the evidence was that only about five nightly were received at 3s. 6d. a week. Both the Assessment Committee and the Recorder, on appeal to Quarter Sessions, had held that the premises were an industrial hereditament and the majority of the Court affirmed that decision though not without some doubt, and both cases were characterised as cases of great difficulty. In these circumstances considerable importance attaches to the dissenting judgment delivered by Mr. Justice Avory. As reported, he appears to have indicated that in the first case he could not distinguish between those premises and any other garage except that they might be somewhat larger, and the object of the Legislature being to relieve productive industry from the burden of local rates, he could not see that it was the intention to relieve such premises as these. Further than that as the Court of Quarter Sessions, being judges of law and fact, had found that these premises were used for the purposes of a retail shop and there was evidence on which they could so find, he could not see that they were wrong in law in their finding. Having regard to the definition of a shop in the Shop Act, 1912, as "any premises on which retail trade or business is carried on" he did not think it essential that the premises should resemble a shop in physical attributes, and the definition clause in the De-rating Act was designed to enlarge and not to narrow the ordinary notion of a retail shop: and the case of Ideal Cleaners and Dyers, Ltd. (14 T.L.R. 371: *The Builder*, May 16, 1930) showed that it was not essential that there should be the ordinary buying and selling on the premises.

In the second case he considered that the facts clearly established that the premises were primarily occupied and used for the purposes of a retail shop and that there was no evidence upon which the Recorder could find that they were primarily used and occupied for the purposes of a factory or workshop.

There seems considerable weight in the abstract proposition that the Legislature never intended to relieve such repairing establishments as these from the rates where a large proportion of the work done must be for the purposes of the unproductive cars used for pleasure only, but of course the point is whether the Legislature in the Act has used expressions which inevitably lead to the conclusion now arrived at by the majority of the Court. From the present brief report available it would however appear that a very large number of garages will claim the benefit of the Act and that there may be difficulty in ascertaining whether any fact is present which will distinguish their cases from those now decided. In the first of the two cases the sale of accessories took place in premises held not part of the hereditament in question, but in the second case there were at the front of the main hereditament show-windows where accessories were exposed for sale, and it would almost appear that the only element left upon which this case could be distinguished would be the sale of cars upon the premises.

Specific Performance: Unusual Covenants.

In a recent case, Flexman v. Corbett (1930, 1, Ch. 672), some important observations were made by the Court on unusual covenants in leases, that is to say covenants onerous in their nature and unusual in character, acceptance of which will not be implied as against a purchaser unless he has had a fair opportunity of ascertaining their terms. We do not propose to enter into the case in detail, as there were other questions involved, but to confine ourselves to the one point as to the position of a purchaser in an action against him for specific performance in respect of covenants contained in the lease relating to the leasehold interest he is purchasing, the effect of which has not been communicated to him either by inspection of the lease or otherwise. The defendant had agreed in the form of a letter to purchase in December, 1928, the residue of a lease granted for a term of 94 years from June 24, 1849. This lease contained covenants by the lessee to do outside painting, to deliver up, to keep in repair, to insure, and a covenant not to carry on certain specified trades "or any other offensive or noisome trade or dealing, or be party to or suffer any act or thing which may be or grow to the annoyance, inconvenience or damage of the occupiers of the neighbouring premises." The house was situated in Chepstow Place.

The defendant had failed to complete at the date named, and the action was for specific performance. The defendant pleaded that the covenants in the lease were of an unusual nature, and that she had not notice of the covenants when signing the agreement and had been given no opportunity of inspecting the lease.

The Court, in giving judgment, intimated that the subject of what are usual covenants as expressed in some of the cases required reconsideration in London, if not elsewhere, and went on to say that it was suggested on behalf of the defendant that the only usual covenants were those specified in Hampshire *v.* Wickens (7 Ch. Div. 555), viz., covenants (1) to pay rent, (2) to pay taxes, (3) to keep and deliver up in repair, (4) to allow the lessor to enter and view the state of repair, and, finally, the usual qualified covenant by the lessor for quiet enjoyment; and this view was supported by certain text-books. But the learned Judge said that, after having considered all the authorities, he had come to the conclusion that the question as to whether covenants were usual was one of fact, and the decision of the Court must depend upon the admissible evidence. Evidence admissible would be that of conveyancers and others familiar with the practice in reference to leases, and it is permissible to examine books of precedents; but it is also permissible to obtain evidence of the practice in the particular district, for it is erroneous to consider that covenants which are "usual" in the case of a country house would be necessarily "usual" in London, and what is usual in Mayfair may also not be usual in Whitechapel, the word "usual" in this connection meaning nothing more than "occurring in ordinary use."

The Court declined to go through all the covenants, as, for instance, the covenant to insure, which the Judge said he would be loth to hold unusual; but, referring to the covenant mentioned above, as to noxious trades, etc., held that in a case such as this, where the premises did not form part of a building estate in an ordinary sense, nor part of a property belonging to the original landlord and developed by him, and where there was nothing to lead the defendant to the conclusion that the property would be subject to

covenants for the benefit of adjoining owners, the covenant including "inconvenience" as well as "annoyance and damage" was an unusual and onerous covenant, especially as, to the knowledge of the plaintiffs, the defendant intended to let the premises as lodgings, and even playing the piano might fall within "inconvenience," if not annoyance.

The defendant was held entitled to refuse to complete the contract, with a return of the deposit and the costs of the action less those costs incurred on other issues.

Our space has not permitted us to refer to those other issues, nor to a question of waiver, and, as regards a covenant for re-entry for breach of any covenant, the Court held that there was not evidence in the case to hold that that covenant was usual, as there was considerable authority in decided cases that in that form it was unusual; but the Court intimated that this was also a question which might be usefully reconsidered in the light of modern evidence.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Cutting Out Dampcourse.

[REPLY TO "T. W. B.," JUNE 20.]

SIR,—A cheaper way of dealing with the trouble is to strip the plaster up to a height of 3 ft. above the floor, and render inside and out with waterproofed cement. The damp will not creep higher than this. It is quite impossible to make a little job of the serious task of cutting out for and inserting a dampcourse.

PRACTICE.

Pebble Dashing.

[REPLY TO "W. McN.," JUNE 20.]

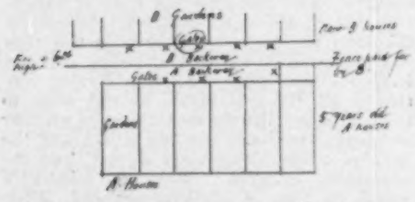
SIR,—I would suggest to your correspondent that he should avoid the use of material and method at variance with local practice. The use of pebble dashing is on the decrease, and rightly, I think, because it can serve no useful purpose as the covering of a wall. A rendering rough from the float is equally effective, cheaper, and more pleasing in appearance.

SURFACING.

Ownership of Fence.

SIR,—The following may be of interest to many new house purchasers in the suburbs.

A. bought his house five years ago, and has a back garden wood fence 3 ft. beyond, leaving a back way for tradesmen, dustmen, etc., and a right of way for his neighbours in the next houses of the block of six houses.



After five years houses are built in a new road behind A. with a similar fence to back garden and a 3 ft. space, leaving the 6 ft. fence as partition between the two. A. has, of course, paid originally for the fence. Whom does it now belong to, and has B. any right to nail or fix to it, or what is the correct procedure?

QUERY.

Defect in Bungalow.

[REPLY TO "C. B. H.," JUNE 20.]

SIR,—Why on earth do not people go to an architect for an architect's job? The best thing your correspondent can do now is to go to an architect to take the negotiations off his hands. By delaying his entry until the trouble is done, "C. B. H." has made the job of the expert as difficult as he can, but it is the only way out. I may explain that an architect cannot always prevent the builders son putting packing-cases into the floors, but he does at least know how to deal with the crime when committed.

PRACTICE.

SIR,—Breach of contract is the failure to perform it; and certainly, on the particulars given, it would appear to be admitted by the builder that he has not performed his contract—consequently, there is a breach of it. In this instance, "C. B. H." is in no way concerned with the architect, in that the latter was employed by the builder direct. He may refuse to pay anything further to the builder and leave the latter to take his own course, and, if he sues, counterclaim for damages. Or he may elect to sue the builder himself, in the first instance, for damages. As to all this, however, he should take legal advice before going further. The length of time that has elapsed does not (on the information given) appear to affect the question at all.

CONTRACT.

Dry Rot.

[REPLY TO "F. L.," JUNE 20.]

SIR,—"F. L." might with advantage read Mr. Creswell's article on "Purchasing a House" in your issue of June 6, at p. 1097. The fact that the house was purchased four years ago is not material in this case. If causes (1) and (2) were, as stated, the main causes for the dry rot, there would be an action for breach of warranty against the corporation; in that (1) is the purchaser's own act and (2) was visible to the eye when he purchased, and what has happened was to be expected, and is a "patent" defect. Further, it might well be contended that (3), (4) and (5) were "patent" at the purchase and could have been discovered by very ordinary inspection. Only if any one or all of (3), (4) and (5) could be shown to be latent defects at the time of the purchase, and such defects as, had they been known to the purchaser, he would not have bought, could there be any chance of success in an action for damages for breach of warranty. Before "F. L." runs any risk in an action, he should first take legal advice.

HOUSE.

Chambers over Chancel Arches.

SIR,—I am very greatly indebted to Professor Lethaby and "Gothic" for their replies to my inquiry on this subject. In this case there is no floor over the Norman vault of the chancel but simply the rough hog-back finish of the vault. It would appear that the wallhead of the original Norman roof has been about 1 ft. or 18 in. higher than the present wallhead, which seems to date from the 1870 restoration.

The roof timbers are all seen through the small opening from the dead end of the rough staircase over the chancel arch, and there is a circular light into the roof in the centre of the east gable of the chancel. The wallhead of the chancel is about level with the hog-back of the vault.

One theory suggested to me since I wrote last is that it might be a staircase to a tower that was not built. This is very unlikely, as the plan of the church does not suggest a central tower, and in any case a 15 in. staircase for a bell-ringer is somewhat restricted. I am not very massive, but I had to take off my jacket and go up sideways to escape lime and dirt. At West Walton, the last stage of the staircase to the roof is (if my memory serves me right) only 14 in., but it is much wider up to the bell-ringer's chamber, on the lower story. Again, if it had been a bell-ringer's stair it would have been built of proper steps and not simply irregular steps formed in the rubble masonry.

In answer to "Gothic," there is no triforium here, at Warkworth, although we know there was a clerestory, which was demolished at the 1870 restoration. I would send sketches of this part of the church, but do not wish to occupy valuable space with what is after all a mere antiquarian problem. A detailed examination of the jointing of the masonry with a good flashlight lamp might reveal some built-up doorway or other evidence of the original intention of this rather unusual feature.

W. D.

BOOK REVIEW

Modern Practical Masonry. By E. G. WARLAND, A.I.Struct.E. London: B. T. Batsford, Ltd. Price 25s. net.

This volume, dealing as it does with all the minutiæ of detail connected with construction in stone, strikes us at once as a thorough treatise on the subject, and deserves to be classed as a standard compilation on masonry—comprehensive, explicit, and authoritative. All who are in any way connected with this most ancient of crafts, whether of practical or theoretical turn of mind, will find a well of valuable information within its covers. The illustrations, of which there are more than 600 and many double-page plates from the author's own drawing-board, are clearly self-explanatory, while there are in addition some 59 photographic examples showing the stone undergoing preparatory treatment by modern machinery and also in actual construction in different stages of progress on the job.

The three broad sections into which the work has been divided are: (1) "Constructional and Practical Masonry," (2) "The Geometry of Masonry," and (3) "Costing and Estimating." The large amount of ground covered by these three sections includes chapters on tools, materials, machines, constructional principles, hoisting, setting and cutting, various building stones in use, plane and solid geometry, costing and estimating, and concludes with a glossary of terms used in masonry.

Steel construction is used so extensively in building to-day that one might almost say that the old orthodox methods of building are undergoing a complete change, if not becoming entirely revolutionised, and instead of masonry being the art of solid building in stone we find that it is becoming a decorative shell presenting the pleasing effect of stone but nevertheless serving as a covering to the main carcase. Such modern methods of construction are all clearly explained and supplemented by diagram and photograph.

The setting out and the shaping of stonework and the necessary governing knowledge of the application of geometry to the art is given its rightful prominence, for the ability to visualise and graphically depict the completely worked unit of stone, also the acquiring of confidence in the solution of other unusual geometrical problems, is dependent upon a thorough knowledge of the principles of plane and solid geometry.

The student having been taken thus far in the study of practical masonry and become proficient in his art, it is only natural that he will desire to gain knowledge of a more analytical nature and to commence the important task of costing and estimating. The section devoted to this branch considers the collection of data and information respecting manufacturers' costs, the measurement of output, establishment charges and oncosts, and the tabulation of such information upon which the final estimate depends. In conclusion, we should like to add that architectural readers will find much valuable assistance herein of the nature which is helpful in the solution of everyday problems of construction which arise in the pursuit of their calling.

THE BUILDING TRADE

USE AND ABUSE OF BUILDING MATERIALS

By A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.

XXVI.—CONCRETE (*Continued*).

Mixing and Curing.

THE proper mixing of the concrete ingredients is very essential if a first-class product is to be produced. A well-known authority has said that proper and efficient mixing of the ingredients may increase the final strength of a concrete by as much as 100 per cent. Mixing may be divided into two stages, viz., the dry and the wet mixing. The object of the dry mixing is to secure, as far as possible, the distribution of the cement among the aggregates.

Though there may be many ideas as to the best methods to be adopted for hand mixing, it seems to be generally agreed that probably the most successful method is to mix the cement and sand together first until the mixture is of a more or less uniform colour. The dry mix may then be spread over the wetted coarse aggregate, mixed up with it by using shovels, and then turned over two or three times. After that a channel or trough should be scooped out along the top of the pile and into this the correct amount of water poured. Starting at the edges the pile should then be gradually turned into the water so that it may be well absorbed, and then the process finished off by three or four more turnings.

As soon as the water has been added the mixing should be done expeditiously. There must be no hesitation or delay in getting it well mixed, as well as, of course, conveying it to its final resting place. This latter is usually done by wheel-barrows, and it is well to note that the distance through which the concrete has to be wheeled should be reduced to a minimum. There should be no unnecessary delay, such as having to transport the concrete through too great a distance, since it is agreed that such delay may cause the "value" of the concrete to be considerably diminished.

Mixing by hand is tedious and arduous work, and though it is possible to get extremely good concrete there is no doubt that the employment of thorough and conscientious workmen will make the cost considerably higher than it would be in the case of machine-mixing. We therefore find that mixing by machinery has become almost universal. The cost of the initial outlay of the machine is recovered in a very few weeks by continuous working. Besides, it must be agreed that, automatically, a more efficient mixture can be obtained by a machine.

Though the claims made by the manufacturers of the different designs of mixing machines may in some cases be considered extravagant, no doubt many of them are quite justifiable. Generally speaking they may be divided into either continuous or batch mixers. Each kind has its particular merits. The batch variety, perhaps, supplies a more uniform concrete, since with the continuous type the resulting product must to a large extent depend upon the regularity of the mechanical arrangements for feeding. It is also said that with the continuous mixer the time of mixing is usually too short to permit of the production of a really good concrete. This, however, should surely only be a matter of adjustment.

In the case of the batch mixer it has been shown that for good results the sand should be put in first, then the cement, followed by the coarse aggregate. The whole should be dry-mixed for from 15 to 20 seconds, the right amount of water then added quickly, and the mixing continued for another minute. It is interesting to note that results of compressive tests upon a 1 : 2 : 4 concrete show that an increase of time of mixing from one minute up to five minutes has increased the compressive strength from just under 2,900 lb. per sq. in. up to approximately 3,200 lb. per sq. in. These values are for ordinary Portland cement and not for any of the rapid hardening varieties.

Another point that is perhaps of rather more than ordinary interest, is the relation between the compressive strengths of concrete made by hand and that made by machine. It is curious to note that in all cases rather more water is used when mixing by hand than by machine. For example, in the case of a 1 : 2 : 4 concrete which was tested for compressive strength at the end of 28 days, the hand-made variety, in which 9½ per cent. by weight of water was used, gave 1,540 lb. per sq. in., while that made by the machine, in which 9 per cent. by weight of water was used, gave 2,050 lb. per sq. in. In the majority of cases it has been found that the compressive strength of the machine-made concrete is greater than that of the hand-made variety. By some it has been suggested that this is due to the more consistent mixing that a machine will give, while others have said that it is brought about by the use of less water.

Curing.

Though this is really an extremely important part of the formation of good concrete, nevertheless it seldom receives the care it demands. Many faults can be traced to improper or neglected curing, such as weak concrete foundation blocks, dusty concrete floors, cracks in walls and reinforced concrete, as well as the lack of imperviousness to moisture, so much so that in some cases one might almost say that the concrete was porous. In this last case it has been shown that a prematurely dried concrete is very permeable; particularly is this the case where a weak mixture is used, i.e., one in which the proportion of cement is on the small side, such as in a 1 : 8, or a 1 : 9 concrete, though one does hear of a 1 : 9 concrete being made watertight under a 100-ft. head of water when proper precautions have been taken as to consistency and efficient mixing and curing.

Curing really means allowing the concrete to set or harden under proper conditions; for example, in warm weather it is said that the work should be kept damp for a period of from two to four weeks. This is really nothing more than common sense, since it is obvious that a warm, dry atmosphere will cause to evaporate much of the water that is required for the hardening or setting. To ensure that the work shall remain damp, the shuttering is sometimes kept on as long as possible.

There still exists an opinion that good concrete is formed by drying it out quickly, though it has been shown over and over again that a better concrete is formed by allowing it to dry slowly in a really damp atmosphere. The protection of hardening concrete from dry, warm winds is just as important as protecting it from frost. Again, keeping the shuttering on is said to be very effective in this direction. It is known that as concrete sets a certain amount of heat is generated, and keeping the shuttering on is a very satisfactory method of preventing any bad effects that may be produced by frost. If it be found necessary to remove the shuttering, then frequent sprinkling with water, or even covering with wet sacks, will help in the proper curing process being obtained.

The "Flow-table."

This piece of apparatus, of comparatively recent invention, for determining the time of setting of concrete is not as well known as one might imagine, though it has been described in the Concrete Year Book. The setting time of cement is fully described in the British Engineering Standards Specification, but, until the invention of the "flow-table" there was scarcely any satisfactory method of determining the setting time of concrete. It is, of course, realised that this setting time depends upon numerous considerations, such as consistency, proportions, etc., but no matter what is the nature of the concrete mix its setting time can now be determined by the use of the flow-table.

In the slump test the measurement of consistency is given by the amount that the height falls below 12 in. when the apparatus is removed from the freshly-made concrete, while in the flow-table test for the determination of the time of setting the heap is made to slump by receiving a series of periodic jolts, and the jolts are continued until the diameter of the base of the concrete heap no longer increases. The apparatus for this flow-table test consists of a fairly substantial horizontal disc of 30 in. diameter. This is arranged so that it can be raised automatically and vertically and then allowed to fall freely, with a jolt, through half an inch.

The concrete is moulded in a vessel similar to that used for the slump test, only its dimensions are 4 in. diameter at the base, 2 in. diameter at the top, and 2 in. in height. After the mould is removed from the concrete the table is given 15 jolts, after which the diameter of the base is measured. The amount that this has increased above the original diameter expresses the quantity that the concrete has flowed. To determine the setting time of the concrete a series of moulds are prepared, and at intervals tests are made upon the flow-table. These are continued until a point is reached when, after the 15 jolts, there is no increase in the diameter of the base of the truncated cone. The period between this time and the time of moulding the concrete is called its setting time. An experiment with a 1 : 2 : 4 concrete, in which 7 per cent. by weight of water was used, gave a setting time of 3 hours 55 minutes.

Permeability.

The amount of work that has been done in attempting to discover a mix and the method of making and curing it so that its permeability shall be negligible is very exhaustive. It appears that what is wanted to obtain a concrete that is impervious to water is one in which there are no voids when the mix is thoroughly consolidated and hardened.

Some years ago, a well-known waterworks engineer said that to make concrete waterproof it was necessary to use an abundance of water in the mixing so that the voids should be entirely filled with a gelatinous material impervious to water. Since then, however, it has been shown that during the setting of concrete any water over and above that required for combining with the silicates and aluminates will tend to evaporate and obviously leave voids. In these days of rapid-hardening cements the essential property of which, it is claimed, is produced by the very much finer grinding apparatus that has been installed, there is no doubt that a really impervious concrete may be attainable, even though it be submitted to tests of fairly high water pressures.

It is rather interesting to note that, in making a non-permeable concrete, one authority suggests that a coarse, gritty sand should be used, while another suggests that sand with fine round grains is better. Both, however, agree that the one absolutely essential condition is that the sand should

be clean, *i.e.*, free from any loamy or earthy material.

It seems that, when considering the imperviousness of concrete to water, it should be realised that water may pass into and even through it by capillary attraction, that it may be forced through by pressure, or that a concrete may be permeable because of both capillary action and pressure of water. For these water forces to act there must be minute ducts or channels which connect up the inter-particle spaces or voids. In order, then, to make a concrete that is non-permeable these little ducts or channels must be eliminated. It has been shown that under a pressure of 100 ft. head of water very few, if any, concrete mixtures are absolutely impervious, though in several cases any moisture that does appear on the side of the concrete opposite to that on which the water pressure is applied is at once removed by evaporation, and such concretes are said to be impervious.

There are many circumstances which are said to affect the permeability of concrete, and though it is not necessary here to describe the experimental method of determining this permeability, it may be observed that such tests have involved the effects that such things as density, the proportion of cement in the concrete, the consistency, the time of mixing, and the curing (which has been previously mentioned), will have upon it. It has also been said that the age of a concrete has a great deal to do with its permeability.

THE HOUSING BILL

I.—RENT RESTRICTION

THE introduction of the new Housing Bill evoked correspondence in the Press afresh on the subject of the Rent Restriction Acts, more especially on the point as to whether, when the object of the Bill is to secure the clearance of unhealthy areas, the improvement of housing conditions in areas, and the demolition of insanitary houses, rent-restricted houses, and protected tenants, sub-tenants, and even under certain circumstances, the inheritors of tenancies, does not tend to frustrate that object.

It may, therefore, be well to see how this matter stands under the Bill. There appears to be only one mention of the Rent Restriction Acts in the Bill, and that occurs in section 18, subsection (3). This section is in Part II of the Bill, which relates to the "Repair and Demolition of Insanitary Houses." By clause 16, where the local authority are satisfied that any house occupied by persons of the working classes is unfit for human habitation, and is not capable, at reasonable expense, of being rendered so fit, notices may be served upon the person having control and upon the owner, and where possible, any mortgagee, intimating the time and place any proposals such owner or mortgagee may make as to the condition of the house, its future user, and any offer with respect to carrying out any works, will be considered, and by subsection (2) it is provided that the authority may, if after consultation with any owner or mortgagee they think fit to do so, accept an undertaking from the owner or mortgagee either that he will within a specified period carry out such works as in the opinion of the authority will render the house fit for human habitation or that it shall not be used for human habitation. Then clause 18, subclause (3) provides, "Where an undertaking has been given under this Part of this Act that any premises shall not be used for human habitation nothing in the Rent and Mortgage Interest (Restrictions) Acts, 1920 to 1925, or in any enactment amending those Acts, shall prevent any owner of those premises from obtaining possession thereof."

It thus appears that the Rent Restriction Acts were present to the minds of the framers of this Bill, but a serious question arises whether, in making this provision that those Acts shall not apply to that one particular case, the authors of this Bill went nearly far enough, for a study of the case Parry *v.* Harding (1925 1 K.B. 111; *The Builder*, May 8, 1925) will show that difficulties may arise between the clauses of this Bill and the existing Rent Restriction Acts.

In framing the Housing and Town Planning Act, 1919, the framers of that Act adopted the course of excluding the Rent Acts, as in section 35 they provided, "Nothing in the Rent and Mortgage Interest (Restriction) Act. 1915, or in the enactments amending that Act, shall be deemed to affect section 17 of the Housing Town Planning Act, 1909, or to prevent a local authority from obtaining possession of any house, the possession of which is required by them for the purpose of exercising their powers under the Housing Acts, or under any scheme made under those Acts." Section 17 of the Housing Act, 1909, related to closing orders. Despite this provision, difficulty was experienced in Parry *v.* Harding, by reason of amendments and repeals in both the Rent Acts and the Housing Acts, and by the fact that the last amendments of both classes of these Acts happened to be made in Acts which came into force on the same day. The local authority were carrying out an improvement scheme under the Housing Acts, and could not obtain possession of a cottage by reason of the Rent Acts, and the court found difficulty in deciding the case on what it termed a labyrinth and jungle of sections, but decided in favour of the local authority on the principle that general words in a later Act capable of reasonable and sensible interpretation without extending them to subjects specially dealt with by earlier legislation do not necessitate the implication that the earlier legislation is repealed in the absence of any indication of a particular intention to do so.

Now, as the matter at present stands, section 35 of the Housing Act, 1919, has been reproduced in section 128 of the Housing Act, 1925, nearly verbatim, as cited above, so according to the decision in Parry *v.* Harding this express provision will hold good under the Housing Bill unless there is anything in that Bill inconsistent with such an interpretation of the two measures, and this is probably the reason why the draftsmen of the Bill have only considered it necessary to allude to the Rent Acts in clause 18, as the undertaking there mentioned goes outside matters covered by section 128 of the Housing Act, 1925.

It is therefore only necessary to see whether there is any provision in the Bill which might prevent the section 128 of the Housing Act, 1925 excluding the operation of the Rent Acts, and so far as we have been able to examine the Bill there is no such provision. Clause 33, moreover, seems directed to securing possession of premises in a clearance area or subject to a demolition order either to the local authority or any owner.

Our object in the present article has only been to indicate whether the doubts expressed by correspondents in the Press that the Rent Acts may affect prejudicially the action of local authorities under this Bill are well founded, but the conclusion we have drawn above that this is not the case must not be taken as indicating that the Rent Acts are not a serious hindrance to better housing conditions outside the scope of this Bill. This Bill is directed solely to action by local authorities, as the Government has taken little account of that private enterprise which has hitherto played the most important part in overcoming the housing shortage, but private enterprise is seriously fettered by the continuance of rent restriction, and we shall refer to this question in a second article.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER office not later than Tuesday evening.

Barking-road.—EXTENSIONS.—Messrs. Louis de Soissons and G. Grey Wornum, of Blue Ball-yard, 64, St. James's-street, S.W.1, have prepared plans for extensions to the Mansfield House University Settlement. The contract has been let to Messrs. Ashby & Horner, Ltd., 8, Aldgate, E.C.3.

Beddington.—FACTORY.—Messrs. D. Rowell and Co., Ltd., 14, Howick-place, S.W.1, have secured the contract for erecting a new factory for the Dumbrill Plant and Engineering Co., 60, Queen's-road, S.W.8. The architect is Mr. T. Smith, 30, Grange-road, Gravesend.

City-road.—FACTORY.—Messrs. H. Gilbert and Co. are to build a new factory, showroom and offices. The site covers Nos. 146, 148 and 150. The architects are Messrs. Scarlett and Manning, 10, Gray's Inn-square, W.C. The estimated cost of the building is £10,000.

Cricklewood.—HALL.—Messrs. C. W. B. Simmonds, Ltd., 75, Shooters-hill, N.W.2, have secured the contract for erecting a new church school hall and classrooms in Sneyd and Anson-roads, for Cricklewood Baptist Church.

Davies-street.—EXTENSIONS.—Messrs. Dorman Long and Co., Ltd., of Westminster, S.W.1, have secured the contract for the supply and erection of approximately 1,100 tons of structural steel for the new extension to Claridge's Hotel. Mr. O. P. Milne, F.R.I.B.A., is the architect and Sir John Wolfe-Barry and Partners are the engineers.

Great Portland-street.—Messrs. Yates, Cook and Darbyshire, 43, Great Marlborough-street, W., have prepared plans for shops and flats at 140-142, Great Portland-street, and 109-110, Bolsover-street. The contract is with Messrs. Bovis (1928), Ltd., 41, Upper Berkeley-street, W.1.

Greenwich.—FACTORY.—Messrs. Field and Co. (Fruit Merchants), Ltd., of Turban House, Eastcheap, E.C.3, propose erecting a factory on a site in Tunnel-avenue.

Greenwich.—OFFICES.—Shell-Mex. Ltd., are to build new offices and stores in Horn-road. The contract has been let to Messrs. J. Garrett and Son, 83, Balham-hill, S.W.12.

Hackney.—BATHS.—The B.C. are proposing to purchase a site in Shacklewell-lane at the rear of Messrs. Eyre and Spottiswoode's printing factory in Downs Park-road for the purpose of erecting branch slipper baths.

Hackney.—PREMISES.—An application has been made to the B.C. by Messrs. Wallis, Gilbert and Partners, 29, Roland-gardens, South Kensington, S.W.7, for erection of a multi-story car park for the Clapton Stadium, Ltd., in Millfields-road.

Hackney.—PREMISES.—Mr. F. T. Dear, architect, is to build and drain premises for the United Dairies, Ltd., on a vacant site abutting on the northern side of Wetherell-road, between Nos. 23 and 24. The application has been approved by the Council.

Harringay.—HALL.—Mr. M. Cane, 66, Victoria-street, S.W.1, has prepared plans for a church hall for St. Peter's Church. The contract has been secured by Messrs. J. Jarvis and Sons, 8, Wormwood-street, E.C.2.

Hendon.—SHOPS, ETC.—Mr. H. Clifford Hollis, 34, Paternoster Row, E.C.4, is the architect for shops and flats in Watford-way, N.W.

Holloway-road.—ALTERATIONS.—Mr. F. N. Kirkby, of Horsleydown, S.E.1, staff architect to Courage's Brewery, has prepared plans for alterations at the "Cock" public-house.

Hornsey.—EXTENSIONS.—For alterations and additions in the extension of the switch room at the electricity works, Tottenham-lane, the T.C. are inviting tenders. Mr. W. H. Adams, Borough Engineer and Surveyor.

Islington.—REBUILDING.—Mr. A. W. Blomfield, architect to Messrs. Watney, Combe, Reid and Co., Stag Brewery, S.W.1, has prepared plans for the rebuilding of the "Marquis of Salisbury" public house in Truling-street. The estimated cost is £7,000.

Islington.—STUDIOS.—We understand that the directors of Gainsborough Pictures (1928), Ltd., whose studios are in Poole-street, Islington, are proposing to rebuild the premises. The company has appointed Mr. Charles Nicholas, F.R.I.B.A., of Messrs. Nicholas and Dixon-Spain, FF.R.I.B.A., 19, Hanover-square, London, W.1, to prepare plans.

Islington.—REBUILDING.—Messrs. Huggins & Co., brewers, 40, Palace-street, S.W.1, have decided to rebuild the "Peacock" public house in High-street. The cost is estimated at £20,000. Plans by company's architect.

King William-street.—The Phœnix Assurance Co., Ltd., are to extend their premises on an adjoining site. The architects are Messrs. Campbell-Jones, Son & Smithers, 9, Dowgate-hill, E.C.4.

Leicester-square.—Work will be started shortly upon the reconstruction of Leicester-square Tube Station. The estimated cost of the work is £400,000. Plans by Mr. S. A. Heaps, L.R.I.B.A., architect for the company, 55, Broadway, Westminster, S.W.1, and the company's engineering staff.

Leyton.—HOSTEL.—Mr. Heaton Comyn, 28, Austin Friars, E.C.2, has prepared plans for a students' hostel for the London University at Whipps Cross. The building contract has been let to Messrs. Wallace and Wallace, Woodford Green.

New Bridge-street.—REBUILDING.—Messrs. Dorman, Long & Co., Ltd., of Westminster, S.W.1, have secured the contract for approximately 4,500 tons of structural steel to be used in the rebuilding of Lever House. The site is on the Victoria Embankment, facing Blackfriars Bridge, and has a side elevation to William-street. The architects are Sir John Burnet and Partners, 1, Montague-place, W.C.1, and the consulting engineer is Mr. Ralph Freeman, of Sir Douglas Fox and Partners.

New Eltham.—CHURCH.—A new chancel, choir and priests' vestries and lady chapel are to be erected at All Saints' Church, to plans prepared by Mr. T. F. Ford, 35, Finsbury-square, E.C.2. The estimated cost of the scheme is £6,000.

North Acton.—DEPOT.—Acton T.C. are inviting tenders for the construction of a central depot at the site of their destructor works, Wales Farm-road. The Borough Engineer, Mr. W. G. Cross, has prepared the plans.

North Audley-street.—Messrs. H. C. Horswill, Ltd., 182, Green-street, E.7, have been let the contract for extending the "Marlborough Head" public-house for Messrs. Watney, Combe, Reid and Co., of Stag Brewery, S.W.1.

Purley.—CHURCH.—Extensions are to be made to the Congregational Church in Brighton-road at a cost of between £5,000 and £6,000. The architect is Mr. T. A. Lewis. The Hut, Harewood-road, Croydon, and the contractor Mr. E. J. Saunders, 468, London-road, Croydon.

Reigate.—CLINIC.—The T.C. inviting tenders for erection of a health centre and school clinic at Blackborough-road. The architect is Mr. David J. Barry, Bank-chambers, Reigate.

Richmond.—SHOPS.—Messrs. Leathart and Granger have prepared plans for shops and flats adjoining Richmond Cinema for Messrs. J. Mears and Co.

Roehampton.—EXTENSIONS.—Messrs. F. & F. H. Higgs, Ltd., Station works, Hinton-road, Herne Hill, S.E., have secured the contract for large extensions to Queen Mary's Hospital for the Ministry of Pensions. The architects are Messrs. Hayward and Maynard, 14, John-street, Adelphi, W.C.2.

Shoreditch.—NURSERY.—The Shoreditch B.C. have authorised the Town Clerk to enter into arrangements for the purchase of a site for the erection of a day nursery.

Stepney.—BUILDING.—An application has been submitted and approved by the B.C. for the erection of a building upon a site at the corner of West India Dock-road and Rich-street, E., for Mr. W. Stewart.

Stonebridge-park.—ALTERATIONS.—Messrs. J. W. Buckingham and Sons, 19, The Parade, Hendon Central, are making alterations to "Altimora" for the Services Rendered Club (Greenwich), Ltd. The architect is Mr. F. L. Berry, 74a, Holland-road, N.W.10.

Stratford-place.—PREMISES.—For the erection of new premises in Stratford-place, Oxford-street, W.1, for Messrs. Lilley & Skinner, Ltd., the contract has been entrusted to Messrs. Harry Neal, Ltd., of Northwood. The architect is Mr. Gordon Jeeves, F.R.I.B.A., 16, Hanover-square, W.1.

Strawberry-hill.—EXTENSIONS.—Messrs. W. H. Gaze and Son, Kingston, have secured the contract for extensions at St. Mary's Training College. The architects are Messrs. Pugin and Pugin.

Teddington.—LAUNDRY.—Messrs. Thorogood Bros., and Son, 55, Bond-road, Tolworth, Surbiton, are erecting new premises for the Hampton Villa Laundry in Waldegrave-road.

Tottenham.—FACTORY.—Messrs. S. Parker and Brown, 816, High-road, Tottenham, are the architects for the erection of an engineering factory in High-road. The estimated cost of the work is £3,000. Messrs. G. Groves and Son, 6, Brine-grove, N.27, have secured the contract.

Tufton-street.—FLATS.—A block of 41 flats is to be erected at a cost of £50,000. The architect is Mr. G. P. Bath, 45, Lincoln's Inn-fields, W.C.2, and the contractors are Messrs. Hammond and Barr, Ltd., of Sloane-avenue, S.W.3.

University-street.—REBUILDING.—Mr. A. W. Blomfield, staff architect to Messrs. Watney, Combe, Reid and Co., of Stag Brewery, S.W.1, has prepared plans for the rebuilding of the "Lord Wellington" public-house at 31.

Victoria Embankment.—PREMISES.—A new building is at present in course of erection for the Cables and Wireless, Ltd., and of Imperial and International Communications, Ltd. The site is that of an old L.C.C. building on the Victoria Embankment, near the Temple Station. Messrs. Dorman Long and Co., Ltd., of Westminster, S.W.1, have secured the contract for the supply and erection of approximately 4,300 tons of structural steelwork. Sir Herbert Baker, R.A., is responsible for the front elevation as well as for the internal decoration scheme, and Messrs. Grace and Farmer are architects for the building, which is being erected under the supervision of Mr. J. Norman Rhodes, F.S.I., Chief Surveyor to Cables and Wireless, Ltd. Mr. B. L. Hurst, M.I.C.E., is the engineer.

Walthamstow.—BUILDING.—The Walthamstow T.C. inviting tenders for the erection of a combined art and handicraft department at the William Elliott Whittingham School, Higham-hill.

Wembley.—Messrs. Shepherd and Thomerson, 80, Queen's-road, Bayswater, W.2, have prepared plans for the erection of a new showroom for Messrs. William Perring and Co., Ltd., High-road.

Wembley.—SHOPS.—A large block of shops and flats is to be built on the site of a church in High-street. Messrs. Hobden and Porri, 27, Finsbury-square, E.C.2, architects.

West Ham.—EXTENSIONS.—Mr. E. J. Partridge, of Bank-chambers, Richmond, Surrey, is the architect for extensions to the Stirling Chemical Works. The contractor is Mr. W. J. Cearns, Carpenter's-road, Stratford, E.15.

Willesden.—SHOPS.—Messrs. Marshall and Tweedy, 24, Margaret-street, W.1, are the architects for the block of shops at the corner of Neasden-lane and North Circular-road.

Wimbledon.—HOUSE.—A house is to be erected at the corner of Victoria-road and Albert-road, for Mr. A. Ornstein. Plans have been prepared by Messrs. Hayward and Maynard, 14, John-street, W.C.2.

Wood Green.—BANK.—Mr. F. C. R. Palmer, F.R.I.B.A., has prepared plans for the erection of new branch premises of the National Provincial Bank in High-road. The contractors are Messrs. C. P. Roberts and Co., Ltd., 31, High Holborn, W.C.1.

Wood Green.—RENOVATION.—The Trustees of Alexandra Palace are making an appeal for funds for an extensive renovation scheme, estimated to cost £200,000. Preliminary plans have been prepared by an advisory committee, comprising Messrs. W. T. Curtis, F.R.I.B.A., Middlesex County Architect, W. H. Adams, Hornsey Borough Engineer, C. H. Croxford, Council Surveyor to Wood Green U.D.C.

NEW CINEMAS

Barnsley.—A contract for alterations and improvements to the Alhambra Cinema in Doncaster-road, to plans prepared by Mr. Percy A. Hinchliffe, architect, 14, Regent-street, Barnsley, has been obtained by Messrs. C. D. Potter & Son, 119, Doncaster-road, Barnsley.

Barnstaple.—The preliminary work on the reconstruction of the Theatre Royal, Barnstaple, has been entrusted to Messrs. McLaughlin and Harvey, Ltd., of Highbury, N. The plans have been prepared by Mr. W. H. Watkins, F.R.I.B.A., of Bristol.

East Ham.—Plans submitted by Messrs. Scriven and Huxtable for alterations to the Coliseum, Green-street, have been passed by the East Ham County Borough.

Feltham.—Messrs. L. F. Richardson, of Mount Ephraim-road, Streatham, S.W., are the contractors for the erection of a new super-cinema, to be known as the "Playhouse." A company called the Feltham Playhouse, Ltd., has been formed to carry out the scheme, to the plans of Mr. Robert Cromie, F.R.I.B.A., of 35, Baker-street, W.1.

Kendal.—Mr. John Stables, architect, Bank-chambers, Ambleside, near Kendal, is preparing the plans for the proposed reconstruction of the County Mews, Sandes-avenue, Kendal, for use as a cinema.

Leamington Spa.—Plans have been passed by the Town Council for a cinema, etc., at Portland-, Augusta- and Dormer-places, for the Bath Cinema Co., with which Mrs. S. Devis is associated.

Littlehampton.—Mr. G. G. Wimbourne, A.R.I.B.A., of Bank-chambers, 214, Bishopsgate, E.C.2, is the architect for the reconstruction and enlargement of the "Palladium" cinema.

Littlehampton.—Plans have been prepared for the reconstruction and enlargement of the "Electric" cinema. The architect is Mr. G. G. Wimbourne, A.R.I.B.A., of Bank-chambers, 214, Bishopsgate, E.C.2.

New Southgate.—A contract for the new super-cinema, the "Coronation," to be erected at High-street and Upper Park-road, N., has been let to Messrs. Mattocks Bros., of Winkfield-road, Wood Green, N.22. Mr. Robert Cromie, F.R.I.B.A., of 35, Baker-street, W.1, is the architect.

Ramsgate.—Ramsgate T.C. have approved plans for the partial reconstruction of the King's Theatre. The front of the theatre will have to undergo alterations in order to accommodate equipment for talking films, which are to be installed in the near future. The architect is Mr. Everard Healey, Grange-road, Ramsgate.

Rugby.—Messrs. Chas. Swain and Partners, architects, 53, King-street, Manchester, have prepared plans for the erection of a super-cinema at the junction of North-street and Newbold-road, to seat 2,000.

Sheerness.—Mr. Leslie H. Kemp, A.R.I.B.A., of 38, John-street, Bedford-row, W.C.1, has prepared plans for the reconditioning and redecoration of the Oxford cinema.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aldershot	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Alfreton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Alnwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashford (Kent)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ashington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aylsham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/8½	1/8½	1/8½	1/9½	1/8½	1/8½	1/8½	1/3½
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bradford-on-Avon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Brentwood	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bridgwater	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bridlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromsgrove	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromyard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bungay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Buxton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Carlisle	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chorley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cirencester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Clacton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cranbrook	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Deal	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Devizes	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dewsbury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E.Glam. (Mon. Val.)	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ely	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Exeter	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Great Yarmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harpenden	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hereford	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Herne Bay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hunstanton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huntingdon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
King's Lynn	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lancaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leamington Spa	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leighton Buzzard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Littlehampton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Liverpool	1/8½	1/8½	1/8½	1/9½	1/8½	1/8½	1/8½	1/3½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London:								
12 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/7½	1/3½
12-15 m. radius	1/8	1/8	1/8	1/8*	1/8	1/8	1/7	1/3
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lowestoft	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Luton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Macclesfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harb'rough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Matlock	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Melton Constable	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Melton Mowbray	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Merthyr Tydfil	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-ur-Lyme	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
New Forest	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Nuneaton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/2½
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2
Paignton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/1½
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2½
Plymouth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Pontypridd	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Redcar	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Redditch	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Reigate	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Retford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ripon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Saffron Waden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sawbridgeworth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Saxmundham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Scarborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Southampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southend-on-Sea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourbridge	1/3½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/1½
Stourport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Stowmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Stratford-on-Avon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swaffham	1/3½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Tamworth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Taunton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Thetford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	1/0½
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/2½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsden	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warminster	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wells (Norfolk)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Weston-sup-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Whitby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wisbech	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Woodbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worthing	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wrexham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wycombe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wymondham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
York	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 1244.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders, and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor D.S.; Clerk, C.; Town Clerk T.C.; County Engineer, C.E.; County Surveyor. C.S.; County Architect, C.A.; Surveyor, S.; Engineer E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JUNE 30.

Aylsham.—Cottages.—Buxton, three pairs, type "A" amended; Skeyton, two pairs, type "A" amended; Wood Norton, two pairs, type "A" amended, for R.D.C. E. D. Browne, clerk.

***Banbury.**—Depot Offices.—For the G.W.R. F. R. E. Davis, Secretary, Paddington Station, London, W.2. Dep. £2 2s.

Basford.—Houses.—14 non-parlour type houses, together with drainage, paths and fences, in Brinsley, for R.D.C. Stephen Maylan, E. and S. Dep. £2 2s.

***Bath.** — Houses. — City Engineer, Guildhall. Dep. £5 5s.

***Bath.**—Flats.—City Engineer, Guildhall. Dep. £5 5s.

Bingley.—Painting, etc.—At Bingley National Schools. Clerk.

Boldon.—Painting.—Internal painting at Smallpox Hospital, Whiteleas, near Boldon, for North East Durham Joint Smallpox Hospital Board. J. Owen, clerk, Council Offices, East Boldon, Co. Durham.

Bradford.—Colouring.—At various schools, for E.C. City Architect.

Bristol.—Additions.—Also alterations, Administration Building, Frenchay Park Sanatorium, Frenchay, for T.C. L. S. McKenzie, City E. and S., 63, Queen-sq. Dep. £3 3s.

Brownhills.—Repairs.—To houses at various sites, for U.D.C. N. Waine, clerk.

Carlisle.—Additions.—Also alterations to administration kitchen (with staff quarters) and stores departments, for Cumberland and Westmorland Joint Mental Hospital, Garlands. H. E. Ayris, architect, 68, Lowther-st., Carlisle. Dep. £2 2s.

Castleton.—Painting.—Outside Castleton East Ward Conservative Club, Dodgson-st., off Fishwick-st., Rochdale. W. H. Bentley, secretary.

Cavan.—Schools.—New schools in Main-st., for Sisters of Poor Clares. P. J. Brady, architect, Ballyhaise. Dep. £3 3s.

Darlington.—Renovation.—Club premises, for East End Club and Institute, Ltd. Secretary, 6, Neasham-rd.

Darton (Yorks).—Painting.—Outside of 200 houses in Darton West housing scheme; 16, Kexbro'-lane; 3, Railway-villas; 4, The Parsonage; 15, Alan-rd.; 6, Barnsley-rd.; 4, The Green. House Agent, Darton Main Colliery, Darton, near Barnsley.

Dublin.—Additions.—Also alterations to Boys' National School, Terenure, Dublin, for Rev. J. Sheehan, P.P. R. J. Boyd Barrett, A.R.I.B.A., architect, 7, Upper Sherrard-st. Dep. £1 1s.

Ealing. — Alterations. — Also additions, West Ealing branch library, for T.C. W. R. Hicks, B.E.

Godstone.—Repairs.—Decorative repairs to 70 houses in parishes of Lingfield (34), Limpsfield (12), Godstone (12), and Tatsfield (12), for R.D.C. S., Lloyds Bank chambers, Oxted.

Grantham.—Houses.—62, on Signal-rd. site, for T.C. P. A. Benn, B.S. Dep. £2 2s.

Gwaun-cae-Gurwen.—Hall.—Also institute, for the Gwaun-cae-Gurwen and District Welfare Association. J. Davies, D.C., secretary, Gorsto-road, Gwaun-cae-Gurwen. Dep. £3 3s.

Huddersfield.—Painting.—Certain schools, for E.C. Borough Architect, 26, Ramsden-st.

Llanrwst.—House.—Minister's house, at Eglwysbach, for Trustees of Bethania C.M. Chapel. R. E. Hughes, J.P., Islwyn, Eglwysbach.

London.—Alterations.—To crematorium chapel, etc., at City of London Cemetery, Little Ilford, for City Corporation. City Engineer, Guildhall, E.C.2. Dep. £2 2s.

Manchester.—Tiles.—Sanitary fittings, wall tiles, and plastering of walls and dayrooms at Crumpsall Hospital, Crescent-rd., Crumpsall, for T.C. Superintendent of Works, Public Health Department.

Mildenhall.—Houses.—6 detached houses at Westrow, for West Suffolk Agricultural Committee. C. F. Pattle, Chief Agricultural Officer, Shire Hall, Bury St. Edmund's.

Mitford and Launditch.—Cottages.—4, Gressenhall; 4, Beeston; 4, Whissonsett; for R.D.C. W. J. Barton, clerk. Dep. £1.

Newcastle-upon-Tyne. — Lodge. — Park-keeper's lodge, etc., Armstrong-pk., for T.C. City E.

Newport (Mon).—Repairs.—Repairs to roofs, Corporation-rd. schools; alterations to roofs, Bryn-glas schools; internal decorating, Shaftesbury school; for E.C. Borough Architect. Dep. £1 1s each.

Newtown.—School Works.—Various schools, for Montgomeryshire E.C. Ll. Phillips, director and clerk, County Education Offices, Newtown. Dep. £1.

Norwich.—Houses.—78 non-parlour houses at **Lakenham estate**, for T.C. J. S. Bullough, City E. Dep. £5.

St. Albans.—Cottages.—168, at Cunningham Hill site, for T.C. F. T. Negus, City E. and S., 38, St. Peter's-st. Dep. £1 1s.

Stapleford.—Houses.—32 non-parlour type on Pasture-lane housing site, also street works, for R.D.C. G. C. Hardy, architect, 11, Church-st. Dep. £2 2s.

Sturry.—Buildings.—Preliminary work of clearing site, making embankment, cuttings and levelling, and erection of required buildings for laying out burial ground, for P.C. H. Middleton, P.A.S.I., chartered surveyor, 5, Church-st., Saint Paul's, Canterbury. Dep. £1 1s.

Surbiton. — Pumping Station. — Reconstruction, for M.W.B. Clerk, 173, Rosebery-avenue, E.C.1. Dep. £10 (payable to M.W.B.).

Talycafn.—Repainting.—Bridge, near Glan Conway, for Denbighshire C.C. E. A. Evans, C.S., 46, C'wyd-st., Ruthin.

Truro.—Reslating.—All Saints' Mission Church, Mylor Bridge, for Parochial Church Council of St. Mylor. Cowell, Drewitt & Wheatly, architects, Mansion House, Truro.

Watford.—Home.—New maternity home to accommodate 22 patients and 22 members of staff, in King-st., for Hertfordshire C.C. Barry Parker, F.R.I.B.A., Norton Way, Letchworth. Dep. £3 3s.

Wembley.—Building.—Glazed brick, terra-cotta or other suitable bath lining, and flooring for conveniences, shower baths, etc., for proposed open-air swimming bath, for U.D.C. C. R. W. Chapman, E. and S.

West Riding.—Painting.—Also decorating at Dalton, Thrybergh, Maltby Crags, Greasbro', Rawmarsh, Ashwood-rd., Rosehill, Netherfield-lane, Rotherham-rd., Aston, Aughton, Swallownest, Fence, and Catcliffe Council schools, for C.C. A. Adcock, divisional clerk, Education Offices, Godstone-rd., Rotherham.

Worsborough.—Painting.—External of 212 houses on various housing estates, for U.D.C. T. Shield, E. and S.

JULY 1.

Bathgate.—Painting.—Bathgate Technical and Roman Catholic (new) schools, also caretaker's house, for West Lothian E.C. E. Blades, Director of Education, Education Offices, Bathgate.

Birmingham. — Heating, etc. — At "Ufculme" Mental Hospital, Queensbridge-rd., King's Heath, for T.C. H. H. Humphries, City E. and S. Dep. £5.

Blackrock.—Wiring.—36 houses in course of erection, for Civil Service Housing Association, Ltd. T. J. Flynn, secretary, 19, Upper Merrion-st., Dublin.

Bonnath.—Villa.—For H. Davies, Arosfa, Boncath. H. Davies.

Carrick-on-Shannon.—Additions.—To Marist Convent, Carrick-on-Shannon, Co. Leitrim. T. F. McNamara & Sons, M.R.I.A.I., architects, 5, Dawson-st., Dublin.

Chingford, E.4.—Houses.—For the U.D.C. Clerk, Town Hall, The Ridgeway. Dep. £2 2s.

Coalville.—Houses.—104 non-parlour type, on sites situate at Coalville, Whitwick and Ellistown, within the Urban District of Coalville, for U.D.C. McCarthy, Collings & Co., architects, Central-chams., Coalville. Dep. £3 3s.

Epsom.—Cottages.—6, at Station-rd., Little Bookham, for R.D.C. F. A. Pratley, S.

Fulham, S.W.6.—Demolition.—Of Swan Brewery Buildings. Town Clerk, Town Hall, S.W.6.

Jedburgh.—Houses.—Block of 6 houses, for T.C. B.S.

Kinghorn.—Houses.—40, on Balliol Field site for T.C. A. Webster, B.S.

Kingston-upon-Hull.—Shop-front.—Showroom shop-front, Beverley, for T.C. J. N. Waite, City Electrical Engineer, Electricity Works, Sculcoates-lane. Dep. £1.

Knottingley.—Houses.—28 on Womersley-rd., for U.D.C. G. J. Laverick, S. Dep. £1 1s.

Mansfield Woodhouse.—Conversions.—Six privies and 50 pail-closets into water closets, for Council, S.

Nottingham.—Painting.—Internal and external cleaning and painting at the School of Art, Waverley-st., for T.C. T. Wallis Gordon, City E. and S. Dep. £1.

Pontrobert.—Repairs.—Also painting, etc., of C.M. Chapel, Pontrobert. J. Evans, The Factory, Meifod, S.O., Mont.

Ruthergien.—Exchange.—Employment exchange, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh.

St. Faith's.—Houses, 4 in parish of Drayton, for R.D.C. A. F. Scott & Sons, F.F.R.I.B.A., 23, Tombland, Norwich.

Swallownest.—Installation.—Electric light at Swallownest council school, Aston, for West Riding C.C. A. Adcock, Divisional Clerk, Education Office, Godstone-rd., Rotherham.

JULY 2.

Andover.—Conveniences.—At Guildhall, for T.C. B.S., Union-st. Dep. £2 2s.

Edinburgh.—Painting.—George Heriot's school, and Trust Offices, 20, York-place, for George Heriott's Trust. G. Malcolm Stuart, clerk, 20, York-place.

Eton.—Painting.—External painting of 40 houses, for U.D.C. J. E. Hattersley, S., High-st.

Galway.—Additions to Galway Hotel, for Great Southern Railways. Chief Engineer, C.S. Railways Co., Westland-row Station, Dublin. Dep. £2 2s.

Garioch.—Rebuilding.—Demolishing and part rebuilding of shops and dwelling houses in connection with proposal to widen Urquhart-rd., near Market-sq., Oldmeldrum, for D.C. of Aberdeen C.C. G. Watt, 15, Station-rd., Inverurie.

Isle of Ely.—Decorations.—(1) At Ely High school, interior decoration (part) and minor repairs; (2) at March High school, interior decoration and minor repairs; (3) at Wisbech High school, interior decoration (part), exterior decoration (part) and minor repairs, for E.C. R. D. Robson, school architect, County Hall, March.

Kiveton Park, near Sheffield.—Conversion.—Into water closets existing closet accommodation at 66 houses, for R.D.C. Sanitary Inspector.

Lichfield.—Houses.—24 non-parlour type, on Dovehouse-fields site, for T.C. Norman Auty, City S. Dep. £2 2s.

Rawmarsh.—Installation.—Of electric light at Rawmarsh Netherfield-lane Council school, for West Riding E.C. A. Adcock, Divisional Clerk, Education Office, Godstone-rd., Rotherham.

Southampton.—Houses.—For the Corporation. Town Clerk, Municipal Offices. Dep. £4 4s.

Wallsend.—Repairs.—At 10, Potter-st., Willington Quay, for T.C. Sanitary Inspector.

Wem.—Houses.—12, at Tennis Courts, for U.D.C. S., Barnard-st. Dep. £2 2s.

Wilton.—Houses.—2 additional houses, etc., at Wilton Police Station, for Wilts Standing Joint Committee. T. Walker, County Architect, Trowbridge. Dep. £2 2s.

Winchester.—Repairs.—Summer repairs at several elementary schools in City, for E.C. Director of Education, 3, The Square.

JULY 3

Bradford.—Building.—Swain House elementary school; manual room, etc., Allerton school; drainage and levelling Carrbottom-rd., for T.C. City Architect.

Bury.—Flats.—220 flats upon land at Springs, near Gigg-lane, for C.B. John Chadwick, B.E. Dep. £5.

Elburton.—Bungalow.—At Elburton Cross, Elburton. W. Roseveare, architect and surveyor, 1a, Bank of England-place, Plymouth. Dep. £2 2s.

Glamorgan.—Improvements.—Painting 33 schools in eastern division and 9 schools in western division; Tairgwaith School, Gwaun-cae-gurwen, converting existing pail closets into water closets; Nantymoel senior mixed school, additions and alterations; Penarth boys' county school, restoration of science block after fire; Llantrisant council school, heating chamber, for C.C. H. Rowland, clerk.

Manchester.—Shelter.—Ladies' dressing shelter at open-air baths at Chorlton-pk., for T.C. City Architect. Dep. £1 1s.

Morley.—Renovations.—At Grammar school, for Governors. W. H. Bolam, clerk.

Rugby.—Heating.—Low pressure hot water heating at Post Office Radio Station, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JULY 4.

Dublin.—Reconstruction.—Of Prince's-st. section (block D.) of General Post Office, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £5.

East Ham.—Secondary Schools for Girls.—For the E.C. Secretary, Education Office, Town Hall, E.6. Dep. £2 2s.

Edinburgh.—Houses.—54, at Dickson-st., Easter-rd., and Marionville-rd., for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Hull.—Painting.—At Grammar school, for T.C. T. Thomas, City Engineer.

Keighley.—Painting.—In main hall at Drake and Tonson's school. S. H. Park, clerk to the Governors.

Liverpool.—Painting.—Internal, etc., at School of Art, Hope-st., for T.C. Land Steward and Surveyor. Dep. £2 2s.

Liverpool.—Painting.—Internal, etc., at Central Technical school, Byrom-st., for T.C. Land Steward and Surveyor. Dep. £2 2s.

Tenterden, Kent. — Houses. — For the R.D.C. Clerk of the Council. Dep. £2 2s.

West Riding.—Repairs.—Painting and distempering Wath Park-rd. Council school; Wath Victoria Council school; Swinton Queen-st. Council school; Swinton Bridge Council school; Wombwell John-st. Council school; Wombwell King-st. Council school; Wombwell Park-st. Council school; also general repairs, etc., at Wath Victoria Council school; Swinton Bridge Council school; for C.C. C. Ellison, Divisional Clerk, Education Office, Swinton, near Rotherham.

JULY 5.

Bramfield.—Institute.—Post Office, Bramfield, Halesworth, Suffolk.

Doncaster.—Wiring.—Complete overhaul and rewiring of electrical installation in Mansion House; complete overhaul, rewiring and alterations to installation in municipal offices; installation certain electric heating in Mansion House, for C.B. T. W. Hibbert, Electricity Offices, Grey Friars-rd. Dep. £1 1s.

Eccles.—Conveniences.—In Church-st., for T.C. B.E. and S. Dep. £1 1s.

Harrogate.—Conversion.—Of Victoria Baths into municipal offices, for T.C. C. E. Rivers, E. and S.

Llanberis.—Additions.—Alterations and additions to Brynrefail County school, Llanberis. Westbury Lloyd Jones, L.R.I.B.A., architect, 14, Market-st., Caernarvon.

Rathmines and Rathgar.—Lavatory.—Public lavatory at Ranelagh, for U.D.C. S.

Sheffield.—Painting.—Cleaning, painting, distempering, etc., and for asphalting playgrounds at certain Council schools, for E.C. W. G. Davies, F.R.I.B.A., City Architect. Dep. £1.

Wolverhampton.—Extension.—For the G.W.Rly. F. R. E. Davis, Secretary, Paddington Station, W.2. Dep. £2 2s.

JULY 7.

Chertsey.—New Drill Hall.—Chairman, Surrey Territorial Army Association, Burwood House, 16, Caxton-st., S.W. Dep. £2 2s.

Eton.—Houses.—6 non-parlour type and appurtenant works at Denham, for R.D.C. A. Gladwell, Housing Architect, Denmark House, Windsor-rd., Slough. Dep. £3 3s.

***Hendon.**—(1) Sports Pavilion; (2) Draining of Playing Field.—For the U.D.C. Clerk, Town Hall. Dep. £3 3s.

Hornsey, N.8.—R.C. Silos.—Town Clerk, Town Hall, N.6.

Hornsey, N.8.—Alterations and Additions.—At the Electricity Works. Town Clerk, Town Hall, N.6.

Hucknall.—Cottage.—At Waterworks, at Salterford, near Calverton, for U.D.C. S. Dep. £1 1s.

Leeds.—Chemistry Building.—The Registrar, The University. Dep. £3 3s.

Liverpool.—Building.—Building work for installation of a bed lift, at Kirkdale Homes, for T.C. E. B. Bailey, L.R.I.B.A., 34, Castle-st.

***St. Austell.**—Goods Shed and Offices.—For the G.W.R. F. R. E. Davis, Secretary, Paddington Station, London, W.2. Dep. £2 2s

Sale.—Houses.—30, on Alice-st. site, for U.D.C. S. Dep. £2 2s.

Sleaford.—Dwellings.—Workmen's dwellings in the following parishes:—Billinghay, 2; Walcot (B'), 2; Osbournby, 2; Heckington, 4, for R.D.C. E. H. Sills, architect.

Uxbridge.—Painting.—Exterior painting and repairs to administrative block at isolation hospital, Kingston-lane, for Uxbridge Joint Hospital Board Wm. L. Eves, surveyor 54, High-st., Uxbridge.

JULY 8.

Southampton.—New Civic Centre.—Erection of Block No. 2, for the Corporation. Town Clerk, Municipal Offices, Southampton.

JULY 9.

Gravesend.—Redecorations.—At Child Welfare Centre, Windmill-st., for T.C. Borough Architect, 5, Woodville-ter.

West Riding.—School.—For 270 children, and domestic subjects and woodwork rooms, at Boroughbridge, for C.C. Education Officer, County Hall, Wakefield

JULY 10.

Athlone.—Church.—New church in parish of St. Peter's, for Rev. Canon Crowe. W. H. Byrne & Son, architects, 20, Suffolk-st., Dublin. Dep. £3 3s.

Devon.—Improvements, etc.—To various schools, for C.C. County Architect, 97, Heavitree-rd., Exeter.

Manchester.—School.—Ladybarn municipal school, Briarfield-rd., for E.C. F. E. Warbreck Howell, T.C. Dep. £2 2s.

***Sidcup.**—School.—For Kent E.C. Director of Education, Springfield, Maidstone. Dep. £2 2s.

JULY 11.

***Bessntree.**—School.—Erection of, on the estate, for the Barking Town E.C. Director of Education, Education Offices, Barking. Dep. £10.

***Hither Green, S.E.**—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep, £1 1s.

***Southampton.**—Painting.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

JULY 12.

Llangyniew.—Painting.—Also renovations, Pennel Congregational Chapel. T. Williams, Chapel House.

Wimbledon.—Library Furniture.—Supplying and fixing, for the Corporation. Chairman, Public Library Committee, Wimbledon.

JULY 14.

***Acton, W.3.**—Pumping Station.—Town Clerk, Municipal Offices. Dep. £10.

London.—Central Depot.—Erection of, for the Acton T.C. Town Clerk, Municipal Offices, Acton, W.3. Dep. £5.

Matlock. — Redecoration. — Of Convalescent Home. Managing Secretary, T.P.S., Hamilton House, Mabledon-place, W.C.1

JULY 15.

Egypt.—Building.—Erection in Northern Nile Delta, fifteen electric pumping stations with necessary building work, machinery and accessories, for Mechanical Department, Ministry of Public Works. Chief Inspecting Engineer, Egyptian Government, 41, Tothill-st., S.W.1. Charge £10 5s.

Hampton.—Houses.—20 non-parlour 2 bedroom type at Priory-rd., for U.D.C. S. H. Chambers, S. Dep. £2 2s.

JULY 16.

***Denton.**—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Penge and Anerley.—Alterations and Additions.—To various schools, for the U.D.C. Clerk, Town Hall, S.E.20. Dep. £3 3s

JULY 17.

***Holloway, N.**—Extension of Money Order Office.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Leamington Spa.—Houses.—For the Corporation. Borough Engineer, Town Hall. Dep. £2 2s.

***London, W.**—Roof Reconstruction and Stable Repairs.—For T.C. B.E., Municipal Offices, Acton, W.3.

JULY 19.

Bolton.—Houses.—For the Corporation. Town Clerk, Town Hall. Dep. £2 2s.

Grantown-on-Spey.—Houses.—Laying out of grounds for three blocks, each containing four 3-roomed houses, for T.C. H. J. Fraser, architect and surveyor.

JULY 21.

Ardee.—Hospital.—New mental hospital, for Louth C.C. H. T. Wright, F.R.I.B.A., architect, 13, Brunswick-place, Newcastle-upon-Tyne. Dep. £10 10s

JULY 25.

***Boreham Wood.**—Houses.—For Barnet R.D.C. Surveyor, Council Offices. Dep. £2 2s.

NO DATE.

Cumberland.—Painting.—Painting and distempering schools, for the E.C. Director of Education, The Courts, Carlisle.

Halifax.—Chimneys.—Taking down of two chimneys, and also dismantling, purchase and removal of cast-iron floor plates, cast-iron joists, and steel stanchions, for Gas Committee. Engineer, Gas Works, Mulcture Hall-rd.

Hayes.—Alterations.—Alterations and additions to Hospital, for Hayes Cottage Hospital. S. H. West, architect, 40, The Broadway, Ealing. Dep. £2 2s.

Kendal.—Reconstructing County Mews, Sandes-av., for use as cinema. Jon. Stables, architect, Bank-chams., Ambleside.

Knottingley. — Painting. — At Askern-Selby-rd. Council school and Kirk Bramwith school. C. Harris, Education Offices, Knottingley.

Mexborough.—Installation.—Of electric light to all departments, at Dolcliffe-rd. Council school, for West Riding C.C. W. H. Jones, Divisional Clerk, Education Office.

Newcastle-upon-Tyne.—Houses.—3 shops and 5 houses on Two Ball Lonnen housing estate, for T.C. Housing Architect, 18, Cloth Market. Dep. £2 2s.

Penistone.—Painting, etc.—Skelmanthorpe, Clayton West, Denby Dale, Birdsedge, Penistone, Oxspring, Silkstone Common, Hoylandswaine, Thurlstone Hunshelf (Green Moor) schools, for West Riding E.C. J. H. Crabtree, Town Hall, Penistone.

Preston.—Excavating.—Excavating and laying reinforced concrete foundations for proposed extensions at County Offices, Preston, for Lancashire C.C. Stephen Wilkinson, F.R.I.B.A., 16, Ribbledale-place. Dep. £2.

***Romsey.**—Alterations and Additions.—To shop premises. Timothy Whites (1928), Ltd., Construction Dept., 30, Chandos-st., Portsmouth.

West Derby.—Building.—Rossington New Senior Council school, provision of two platforms; Barnby Dun Council school, internal and external decorations, and Bentley Cooke-st. Council (mixed) school, internal decoration, for E.C. A. J. Dempster, Divisional Clerk, Winchester House, Scotlane, Doncaster.

West Riding.—Repairs.—Painting, etc., at Ecclesfield, Hoyland Common, Dinnington, Laughton, and Wales; repairs, etc., at Laughton, Anston, Harthill and Hoyland; and asphalting repairs at Ecclesfield, Harthill and Dinnington; plastering at Kiveton Park, for C.C. A. Rayner, 151, Cross Hill, Ecclesfield.

MATERIALS, etc.

JUNE 30.

Warrington.—Cement, etc.—For Corporation. A Cook, engineer, Mersey-st.

JULY 3.

Dymchurch.—Cement, etc.—For Romney Marsh Level. D. Hamill Morton, Expenditor.

JULY 7.

Litherland.—Limestone and Granite Chippings.—For U.D.C. Geo. Ponsford, E. and S.

JULY 8.

Plymouth.—Pipes.—1,000 yds. of 9 in., 2,000 yds. 6 in., and 4,000 yds. 4 in. cast-iron pipes, for C.B. F. Howarth, Water Engineer.

ENGINEERING, IRON AND STEEL

JUNE 30.

Beeston.—Bridge.—Over L.M. and S. Rly. at Padge Crossing, Humber-rd. South, Beeston, with all appurtenant works thereto, for U.D.C. Dep. £5 5s.

Glasgow.—Reconstruction.—Of King's Bridge, for T.C. D. Stenhouse, T.C. Dep. £5 5s.

Peterborough. — Bridge. — Reinforced concrete bridges over Riven Nene and L.N.E. Railway at Peterborough, reinforced concrete retaining walls and embankments connecting the above works, carriageway, and works contingent to above, for Soke of Peterborough C.C. Clerk to C.C. Cross-st., Peterborough.

JULY 1.

Gannock.—Sewerage.—Providing and laying approx. 2,130 lin. yds. of 9 in. stoneware sewers, 4,590 lin. yds. of 6 in. stoneware sewers, 1,040 lin. yds. of 8 in. cast iron rising main, 660 lin. yds. of 12 in. cast iron outfall sewer, and 480 lin. yds. of 12 in. stoneware outfall sewer, together with two pumping stations, balancing tank, sedimentation tanks, storm tank, three filter beds, humus tank, sludge beds, pump house and well, manholes, flushing chambers, etc., at Penkridge, for R.D.C. Col. H. M. Whitehead, O.B.E., engineer. Dep. £5

Canvey Island.—Sewerage.—For U.D.C. H. H. L. Harrison, clerk.

Ipswich.—Sewage.—Disposal works to replace those existing, for C.B. A. Moffat, T.C. Dep. £10.

Seaford.—Widening.—Of Parade for a length of about 120 yds., for U.D.C. E. A. Lister, S.

JULY 2.

Broadstairs and St. Peter's.—Reservoir.—Reinforced concrete covered service reservoir at Rumfields Pumping Station, St. Peter's, for U.D.C. Rofe & Raffety, consulting engineers, 208, Abbey House, Victoria-st., Westminster, S.W.1. Dep. £5 5s.

JULY 4.

Blythburgh.—Temporary Bridge.—Pulling down existing brick and cast-iron bridge, and building of new three-span ferro-concrete bridge, for East Suffolk C.C. W. Jervis, C.S. Dep. £2 2s.

Helston.—Water Supply.—1,700 yds. of 3 in. cast-iron pipes, together with 300 yds. of 6 in. stoneware pipes, feed mains, ram house, mass concrete reservoir, and other works, in St. Keverne, for R.D.C. Lemon & Blizard, consulting engineers, 24, Lockyer-st., Plymouth. Dep. £3 3s.

Newton Abbot.—Culvert.—Demolition portion of existing arch, to extent 50 lin. yds., and construction reinforced concrete roof supported by concrete-encased steel beams in place thereof; and strengthening further portion of existing arch, to extent of 75 lin. yds., by means of concrete-encased steel beams, etc., in Market-st., for U.D.C. C. D. White, S. Dep. £1.

JULY 5.

Myerscough.—Widening.—Of Baccus Bridge on Preston and Lancaster-rd., Myerscough, and Keer Bridge, on Lancaster and Milnthorpe-rd., half Cardforth and half Warton-with-Lindreth, for Lancashire C.C. County Surveyor and Bridgemaster, County Offices, Preston.

JULY 7.

Donsastr.—Sewerage.—Laying 70 lin. yds. of 30 in. surface water drain, together with necessary manholes, etc., near Holmes pumping station, for C.B. F. O. Kirby, B.E., 2, Priory-place.

Stoke-on-Trent.—Sewage.—Concrete channel on line of Fowlea Brook Course, between Newcastle Canal Aqueduct and Etruria Station, together with other incidental works, for T.C. City Sewage Engineer, Leek-rd. Dep. £3 3s.

JULY 8.

Tullamore. — Water Supply. — Low-level tank, pump house, fencing, rising main, new 9 in. main from proposed high level tank to town, other incidental works, for U.D.C. P. H. McCarthy, consulting engineer, 26, Lower Leeson-st., Dublin Dep. £5.

JULY 9.

Birmingham.—Widening.—Also straightening and improvement of about 1¼ miles of River Tame, between Hams Hall Sidings Bridge, near Coleshill Station, and Curlworth Bridge, and other incidental works, for T.C. H. H. Humphries, City E. and S. Dep. £2.

JULY 10.

Bridlington.—Waterworks.—At Hunmanby, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-buildings, Parliament-st., Nottingham. Dep. £3 3s.

JULY 12.

Nottinghamshire.—Bridge.—Construction bridge in reinforced concrete over River Maun on new by-pass road at Ollerton, and bridge over Beck on new by-pass road at Carlton-on-Trent on Great North-rd., 9 miles north of Newark, and widening 3 small bridges in reinforced concrete, i.e., Packman's Bridge, Ruddington, Bunny Bridge, Bunny, and Costock Bridge, Costock, for C.C. J. Cracroft Haller, C.S. Dep. £2 each.

JULY 17.

Cradley.—Footbridge.—At Cradley Heath and Cradley Station, for G.W.R. Engineer, Paddington Station, London, W.2. Dep. £2 2s.

JULY 18.

Oldbury.—Bridge.—Strengthening and widening in ferro-concrete on Hennebique system, bridge over canal at Church-st., for U.D.C. Wm. Greenwood, E. and S. Dep. £2 2s

JULY 25.

Axbridge.—Water Supply.—Covered concrete reservoirs, small pumping station, excluding machinery, foundations only for erection of 16,000 gallon elevated steel tank and laying of some 34,996 lin. yds. of 5 in., 4 in., and 2 in. cast-iron mains, together with all works auxiliary thereto for R.D.C. Parker Pearson & Ross Hooper, engineers, Dallas-chams., Chippenham. Dep. £5

AUGUST 17.

Egypt.—Building.—Ministry of Public Works, for 15 electric pumping stations, etc., for Government Chief Inspecting Engineer, Egyptian Government, 41, Tothill-street, S.W.1. Charge £10 5s.

ROAD, SEWERAGE, AND WATER WORKS

JUNE 30.

Egham.—Reconstruction.—Of Ridgemead-rd. and Wellington-av., for U.D.C. R. I. Weymouth, E. and S. Dep. £2 2s each road.

Esher and The Dittons.—Making-up.—Woodside-av., Thames Ditton, and Portsmouth-av. (Section II), Thames Ditton, for U.D.C. S.

Elland.—Water Supply.—New 10 in. duplicate pipe sewers, for U.D.C. T. Exley-Fisher, E. Dep. £3 3s.

London.—Repairs.—To carriageways with clinker and mastic asphalt, for Islington B.C. B.E.

Ruislip-Northwood.—Sewer.—Laying 1,600 lin. yds. soil sewers, with manholes and incidental works, for U.D.C. H. R. Metcalfe, E. and S Dep. £2 2s.

Ware.—Making-up.—Streets, for U.D.C. S. Dep. £1.

JULY 1.

Ballina.—Water Supply.—New 10 in. duplicate water main, about 9,597 yds. in length, from Lough Brohly to Ballina, also some 6 in. and 4 in. mains, together with valves, fittings, and other works, for the U.D.C P. H. McCarthy, consulting engineer, 26, Lower Leeson-st., Dublin. Dep. £10

Seaford.—Widening.—120 yds. of the Parade, for U.D.C. E. A. Lister, S.

JULY 2

Acton.—Reconstructing part Southfield-rd. alternatively with wood blocks or asphalt, for T.C. W. G. Cross, B.E. Dep. £1 1s.

Birmingham.—Paving.—Supplying, laying and maintaining 2 in. hand-laid asphalt paving following. Kingstanding-rd., Perry Barr; College-rd., and Sutton-rd., Perry Barr; Nechells Park-rd., for T.C. H. H. Humphries, City E. and S. Dep. £1 each road.

Clacton.—Making-up.—Anchor-rd., for U.D.C Wm. Aiston, S.

Hebburn.—Reconstruction.—Also asphalt surfacing of various roads in district, for U.D.C. S. Dep. £5.

Leasiemouth.—Street.—Construction of Dunbar-st., for T.C. J. Milne, B.S.

Walsall.—Sewerage.—Laying and jointing of approx. 1,383 yds of 9 in. stoneware pipe sewers, construction of manholes, and all necessary works relative thereto, at Birmingham-rd., Gt. Barr, for R.D.C. W. F. Young, E. and S. Dep. £2 2s.

Wembley.—Making-up.—Of Girton-av., carriageway and footpaths, approx. length 230 yds.; Ecclestone-place, carriageway and footpaths, approx. length 240 yds.; Charterhouse-av. (2nd part), carriageway and footpaths, approx. length 270 yds., for U.D.C. C. R. W. Chapman, E. and S. Dep. £1 1s. each.

Wembley.—Surfacing.—Carriageway of Wembley Hill-rd. (second portion) (approx. 1,330 sq. yds.) with bituminous asphalt, for U.D.C. C. R. W. Chapman, E. and S. Dep. £1 1s.

JULY 3.

Luton.—Reconstruction.—Of Marsh-rd., for T.C J. W. Tomlinson, B.E. and S., 18, Upper George-st.

Luton.—Making-up.—Tower-rd. and Whitecroft rd., for T.C. J. W. Tomlinson, B.E. and S., 18, Upper George-st.

Malden.—Making-up.—Of Queen's-av., for T.C. B.E. Dep. £1 1s.

Salisbury.—Making-up.—Coronation-rd., Empire-rd., Queen Alexandra-rd., Nursery-rd. and Gramshaw-rd., for T.C. City E. and S. Dep. £1 1s. each.

Southampton.—Reconstructing.—Asphalting and other incidental works at Bitterne-rd., area about 10,000 sq. yds., Mousehale-lane, Westend-rd., tarmacadam, area 4,800 sq. yds., Redbridge Hill, asphalt, area about 9,500 sq. yds., Bassett-av., asphalt, area about 20,000 sq. yds., for C.B. B.E. 33-35, French-st. Dep. £1 1s. each.

JULY 4.

Crompton.—Paving, etc.—Queen-st., part of, 164 lin. yds.; Frederick-av., 64 lin. yds.; back Frederick-av., 64 lin. yds., for U.D.C. F. T. Jones, E. and S. Dep. £1 1s.

East Linton.—Pipes.—Cutting tracks for and laying and jointing about 1,000 yds. of 6 in. and 3 in. pipes with relative works, for T.C. J. & A Leslie & Reid, C.E., 72a, George-st., Edinburgh. Dep. £1 1s.

Southport.—Main.—Laying about 4,540 yds. of 18 in. water main from Bickerstaffe pumping station to near Aughton Park Railway Station, in parish of Aughton, for Southport and District Water Board. C. Burton Ede, Engineer and Manager, 14, Portland-st. Dep. £2.

JULY 5.

Wirral.—Sewer.—162 yds. lin. 7 in., Pensall-drive, Pensby; 319 yds. lin. 6 in., Mount-rd., Storeton, for R.D.C. W. W. Shennan, E. Dep. £1 1s.

JULY 7.

Beckenham.—Widening.—Portion of South Eden-pk.-rd. for length of about 700 lin. yds., for U.D.C. H. Storr Best, S., 36, High-st. Dep. £2

Maldens and Coombe.—Making-up.—Of Green-lane, comprising 390 yds. run of reinforced concrete carriageway, also kerbing and footways, and other appurtenant works, for U.D.C. R. H. Jeffes, E. and S. Dep. £2 2s.

Maldens and Coombe.—Sewer.—Laying 860 yds. run of concrete tubes of various sizes, 18 in., 15 in., 12 in. dia., and brick manholes, in South-lane, for U.D.C. R. H. Jeffes, E. and S. Dep. £2 2s.

Swindon.—Resurfacing.—Certain carriageways, comprising an area of about 18,000 sq. yds., for T.C. J. B. L. Thompson, B.S., 34, Regent-circus.

JULY 8.

Castleford. — Making-up. — Private streets, for U.D.C. L. Birch, S. Dep. £3 3s.

Southgate.—Sewer.—565 lin. yds. of 24 in. dia. and about 331 yds. lin. of 9 in. dia. stoneware pipes, with all necessary manholes, etc., in North Circular-rd., Edmonton, for U.D.C. R. Phillips, S Dep. £2.

JULY 9.

Kingsbury.—Making-up.—Queen's-walk, Kingsmead-av., Queensbury-rd., Sunnymead-rd., Mountdrive, The Mount, for U.D.C. R. C. N. Newport, S. Dep. £2 2s.

JULY 10.

London.—Paving.—Providing and laying bituminous surfacing material and incidental works in Brompton-rd., from Hooper's-court to Fulham-rd.; Kensington Park-rd., from Elgin-crescent to Archer-st.; and Ifield-rd.; for Kensington B.C. B.E.

London.—Paving.—Resurfacing with 3 in. bituminous macadam, portion Cornwall-rd., from Clarendon-rd. to Ladbroke-grove, for Kensington B.C. B.E.

JULY 14.

Acton.—Paving.—Reinforced concrete paving to yard area central depot, construction of reinforced concrete road, and excavation for railway siding, for T.C. W. G. Cross, B.E. Dep £3

Acton.—Mains.—42 in. and 36 in. diameter cast-iron rising mains and other incidental works at Sewage Pumping Station, Warple Way, for T.C. W. G. Cross, B.E. Dep. £2 2s.

Plymouth.—Drains.—Providing and laying of about 800 yds. of 9 in. stoneware pipe drains, at Corporation Mental Hospital, Blackadon, for T.C. J. Wibberley, A.M.Inst.C.E., City E. Dep. £2 2s.

JULY 25.

Portsmouth.—Sewer.—Sewers and works in connection therewith, comprising approx. 3,187 lin yds. of 66 in. dia., 607 lin. yds. of 63 in. dia., 608 lin. yds. 54 in. dia., 260 lin. yds. 42 in. dia., 309 lin. yds. 39 in. dia., 77 lin. yds. 33 in. dia., and 12 lin. yds. 24 in. dia. concrete tube sewers, with manholes, etc., together with extension existing sub-pumping station, storm overflow chamber, and approx. 134 lin. yds. 36 in. dia. cast-iron rising main, at Copnor, for T.C. R. J. Jenkins, City E Dep. £5 5s.

Auction Sales, Tenders, etc.

JULY 9.

***London.**—Henry Butcher & Co., by order of R. S. Ford, A.C.A., will sell, on the premises, Mordaunt-road, Harlesden, N.W.10, Builders' Plant and Material. Auctioneers, 63-64, Chancery-lane, W.C.2.

JULY 22.

***Letchworth.**—By order of Messrs. Woodworkers, Ltd., Henry Butcher & Co. will sell, on the premises, Woodworking Plant and Machinery and Stock of Timber. Auctioneers, 63-64, Chancery-lane, W.C.2.

Public Appointments

JULY 1.

Shrewsbury.—Architectural Assistant, Junior Architectural Assistant. A. G. Chant, A.R.I.B.A., 6, Belmont.

JULY 2.

***Norwich.**—Architectural Assistant, Temporary, required by Norfolk C.C. S. H. Warren, County Surveyor, 9, Queen-street.

***Norwich.**—Clerk of Works required by Norfolk C.C. County Surveyor, 9, Queen-st.

JULY 5.

***Leeds.**—Clerk of Works. Executive Officer, 38, Park-square.

JULY 7.

***Clitheroe.**—Clerks of Works required by the Corporation. Borough Surveyor, Town Hall. Church-street.

JULY 10.

***London.**—Architectural Assistant. Town Clerk, Southwark Town Hall. Walworth-road, S.E.17.

NO DATE.

***Sudan.**—Woodworking Shop Foreman required in P.W.D. Advisory Engineer, London Office. Wellington House, Buckingham-gate, S.W.1.

***Sudan.**—Two Foremen required in P.W.D. Advisory Engineer, London Office, Wellington House, Buckingham-gate, S.W.1.

London Master Builders' Sports Association.

Below we give results and tables for the cricket section of this Association up to June 21 :—

RESULTS.

Division A.—Minter 163 for 8 w. *v.* Broadmead 122; Downs 106 *v.* Forton 66.

Division B.—Trocoli 97 for 3 w. *v.* Dawnays 91.

LEAGUE TABLES.

Division A.

	P.	W.	D.	L.	Pts.
Broadmead ...	5	3	1	1	7
Holloways ...	5	3	1	1	7
Minter	4	2	2	—	6
Farmiloe ...	5	2	—	3	4
Downs	4	1	1	2	3
Forton	5	—	1	4	1

Division B.

Higgs	2	2	—	—	4
Wills	4	2	—	2	4
Sowestone ...	4	1	2	1	4
Trocolls... ...	5	1	2	2	4
Dawnays ...	3	1	—	2	2

PROPOSED NEW BUILDINGS AND OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council, U.D.C. for Urban District Council; R.D.C. fo Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Abram.—D.C. proposing 50 houses, Crankwood-rd.

Ardsley.—F. Clough is to erect detached houses at Blackgates, Wakefield-rd.

Armagh.—Artizans' Dwellings Committee of U.D.C. approved building sites for erection of artizans' dwellings.

Ashton-under-Lyne.—Borough Electrical Engineer to prepare estimate of renewing electric light installation in Market Hall.

Askern.—West Riding C.C. and Doncaster R.D.C. approved upon Moss-rd. site Council school.

Banbury.—Old Red Lion Hotel been sold by owners to Woolworths, Ltd. Covered courtyard will be pulled down and new building erected.

Barking Town.—U.D.C. instructed E. and S. to proceed with construction open-air swimming bath and children's paddling pool. Plans passed: 19 houses, Ventnor-gardens, H. Ranson; alterations building at Battery-wharf, Abbey-rd., Austins (East Ham), Ltd.; mission hall, Hedgemans-rd., London City Mission.

Barnet.—U.D.C. approved plans for extension Roman Catholic Church in Union-st.

Bath.—E.C. instructed architect to prepare plans for open-air school.—E.C. to obtain site for new school near houses to be erected at Odd Down.

Belper.—R.D.C. propose build additional houses at Duffield, and has under consideration erection of other houses at Hazelwood.

Birkenhead.—Birkenhead and District Co-operative Society, Catherine-st., proposing dairy in Woodchurch-rd.—Public Assistance Committee to proceed with additional ward pavilion at Infectious Diseases Hospital.

Birmingham.—Extensions proposed to premises of Evans & Matthews, Bull-st. No architect yet appointed.

Blackpool.—Medical Officer of Health submitted plan and elevation of proposed new boundary wall on easterly side of Sanatorium, and C.B. resolved that plan and elevation be approved.—Council approved position of proposed new conveniences and tramway passenger shelter at Layton.—Plans passed: 10 bungalows, Bryning-av., R. H. Sumner; 5 houses, Rathlyn-av., Witt & Grimbledestone; 8 houses, Lomond-av., Hall Estate Building Co.; hotel and garage, Promenade and Waterloo-rd., Dutton's Brewery Co.; 7 houses, shop and 3 garages, Arnott-rd., Hogarth & Pollard; 7 houses, College-av., Fielden & Dawson; 10 houses, Montpelier and Beaufort-avs., J. Ridyard; 16 houses, Warbreck-drive, Bryning & Done; house, South Park-drive, A. E. Holmes; 9 houses, Kempton-av., Wilson & Thornton; church and Sunday school, Central-drive, Rev. G. Jackson; alterations, "Grapes Hotel," Burtonwood Brewery Co., Ltd.; alterations, 110, Central-drive, Yorkshire Penny Bank; 4 garages, Queen's-drive, J. C. Currah.—Plan and elevation of new tram passenger shelter to be erected in Talbot-sq., together with estimate of cost, been approved.—Application is to be made to M.H. for sanction to £4,127, for extension, Palatine Central school.—Plans and estimate of clubhouse at municipal aerodrome been approved and B.S. to proceed with work at once.

Bolton.—Libraries Committee decided to convert juvenile department of High-st. Library into open access system.

Bromley.—R.D.C. approved:—W. Babbs, 3 bungalows, Arterial-rd., St. Paul's Cray; Cooper & Sharman, pair of houses and 2 detached with garages, Oaklands-av., West Wickham; Cooper & Sharman, 3 pairs of houses and garages, The Grove, corner of Oaklands-av., West Wickham; A. Hartley, nine garages, Copse-av. and Boleyn-gardens, West Wickham; J. C. Derby, 2 pairs of houses and 1 detached with garages, The Avenue, corner of The Drive, West Wickham; R. J. Moore, 6 garages, Lovibonds-av., Orpington; J. Edmonds, 8 pairs of houses and 1 detached with garages, Charterhouse-rd., Orpington; A. Durling, 4 pairs of houses, Kingsway, Orpington; J. A. Jones, 5 pairs of houses and garages, Goodhart-way, Hayes; H. F. Thoburn, block of 3 shops, Ravenswood-cres., West Wickham; Smith & Stafford, 16 pairs of houses, with garages, Bruce-grove, Barn Hawe estate, Orpington; C. E. W. Motley, 5 pairs of houses, with garages, Goodhart-way, Hayes.

*See also our List of Contracts, Competitions, etc.

Carburton.—Welbeck Estates Co., Ltd., prepared plans for Church school.

Chatham.—T. Cornilius & Sons, builders, Avondale-rd., Gillingham, are to erect 12 houses in Beechwood-av.

Chester.—T.C. to borrow money for 42 parlour 166 non-parlour houses and 8 combined houses and shops on Lache estate. Plans by City S.—Application to be made to Electricity Commissioners for £5,000 for alterations electricity showrooms, Northgate-st.—Plans passed: 19 houses, Parkgate-rd., C. Orme; extensions, Chester Training College; extensions, Grosvenor Motor Co.'s premises.—Canal bridge, Sanghall-rd., to be reconstructed.—Council to proceed with construction of Ring-rd., at £418,000.

Conisborough.—U.D.C. propose additional 40 houses.

Coventry.—Atkinson's Brewery erecting public house on Lime Tree estate, at £16,000.

Culmstock.—U.D.C. considering sites for housing.

Darlington.—T.C. proposing school adjoining existing Dodmire Council school. Plans by E. Minors, B.S.

Derby.—Corporation received sanction to proceed with 260 houses at Alvaston, by direct labour.

Derby.—T.C. been recommended that tender of £79,500 be accepted for erection of Queen-st. baths.

Dewsbury.—Borough Architect prepared plans for altering and enlarging public library, at £1,500.

Doncaster.—Start being made upon alteration scheme to provide increased accommodation at West Riding Courthouse.

Dorchester.—T.C. approved plans by B.S., for additions and alterations to market.

Durham.—M.H. sanctioned application of R.D.C. for borrowing £4,500 for purchase and adaptation of Byland Lodge, Durham, as public offices.

Edmonton.—U.D.C. approved: H. Curnew, 4 houses, Ridge-av. and York-rd.; A. F. Whitlock, rebuilding of 35, 37 and 39, Fore-st.; W. A. Cherry, 36 houses, Causeyware-rd., F. C. Dabbs, extensions, factory premises, College-gardens; Metropolitan Electric Tramways, Ltd., extension sub-station, Tramway-av.; G. Newman, 9 houses, Dorchester-av.; G. Newman, 16 houses, Ashley-gardens; North Metropolitan Electric Power Supply Co., sub-station, Hedge-lane; North Metropolitan Electric Power Supply Co., sub-station, Church-st.

Farnham.—U.D.C. approved:—Alterations, Westminster Bank, T. P. Bennett & Sons.

Foleshill.—R.D.C. approved: 20 houses, Walsgrave-rd., Wyken, G. A. Johnson; temporary infants' school, of Wyken Grange-rd., for Warwickshire C.C.

Folkestone.—Health Committee of T.C. propose further 100 houses.

Glendale.—R.D.C. approved alterations 13 cottages at Presson, for Grey & Patterson.

Greengates.—Bradford Industrial Co-operative Society, Ltd., new premises junction of Harrogate-rd. and Leeds-rd.

Hendon.—Council propose building school for 400 children at Park-rd.

Holbeck.—Plans prepared by —. Whittaker, architect, Yorkshire Penny Bank-buildings, Infirmary-st., Leeds, for extensions, Holbeck-lane branch bank, for Yorkshire Penny Bank, Ltd. Tenders being invited.

Hollingbourne.—R.D.C. approved: 4 houses, Milgate, Thurnham, W. H. Robinson; electricity buildings, Huntsman's-lane, Boxley, Central Electricity Board.

Huddersfield.—C.B. to carry on school building scheme. Reorganisation involves building new senior and junior schools in various parts of town and provision of science rooms. Cost of new buildings (excluding cost of the site) will be £39,000, of conversions, additions, etc., £11,900.

Huddersfield.—Abbey & Hanson, architects, 11, Cloth Hall-st., prepared plans for hotel at New Mill, which will be known as "Duke of Leeds."

Hull.—E.C. submitted to B. of E. revised plans for elementary school at Westcott-st., and approved plans for junior and senior departments at Hall-rd. school.—Bladons (Drapers and Furnishers), Ltd., Prospect-st., proposing alterations to premises. Plans by A. Easton, F.R.I.B.A., architect, 1, Manor-st., Hull.

Hursley.—R.D.C. approved:—2 pairs semi-detached houses, Chalvington-rd., Chandler's Ford, Venning Bros.

Ince.—U.D.C. propose laying out Greenfield estate as housing site. Plans by P. Fairclough, surveyor.

Kettering.—Gotch & Saunders, F.R.I.B.A., Bank-chams., prepared plans for alterations and extensions to club premises in Argyle-st., for Kettering Argyle Club and Institute.—Gotch & Saunders, F.R.I.B.A., Bank-chams., prepared plans for 9 houses with shop in Bath-rd., for F. G. Barlow.

Kettering.—U.D.C. approved: J. Elworthy, Ltd., additions, "George" Hotel, Sheep-st.; K.I.C.S., Ltd., warehouse and drainage, Central Stores, Newland-st.; Northants E.C., additions, Boot and Shoe Institute, Thorngate-st.

Leeds.—E.C. obtained sanction to borrow £29,687 for additional departments at Osmondthorpe Council school. J. E. Acfield, City Architect.

Liverpool.—Parishioners, St. Clare's, Liverpool, proposing memorial to late Canon Crooke, at £800.

Liverpool.—E. B. Bailey, L.R.I.B.A., architect, Cook-st., been instructed by Public Assistance Committee to prepare plans for extension nurses' home at Alder Hey Hospital, West Derby

London (Battersea).—B.C. recommend that, subject to L.C.C. sanctioning loan, to purchase 158 to 166, Lavender-hill, and freehold interests in 1 and 3, Eland-rd., for municipal accommodation.

London (Fulham).—B.C. received L.C.C. sanction borrowing £52,165, for acquisition of Swan Brewery premises for housing purposes.

London (Hackney).—B.C. received sanction M.H. in connection with purchase of 12, 14 and 16, Englefield-rd. for site for branch baths.

London (Hackney).—B.C. approved: D. Hamilton, two motor garages adjoining 56, Rushmore-rd. and 59, Mayola-rd.; Sir W. Prescott & Sons, Ltd., garage, abutting on Urswick-rd., between Halidon-st. and L.C.C. school; G. Stoddart & Sons, 6 lock-up garages on site between 123 and 125, Cazenove-rd.—B.C. recommend £236 upon conversion 43, Hackneygrove, to provide additional office accommodation.

London (Paddington).—B.C. recommend: W. Henry White & Sons, on behalf of Summit Estates, Ltd., to construct vaults under, to fix pavement lights in public footway outside new buildings on the sites 11-47, Queen's-rd.—Council recommend £760 for compulsory acquisition of site formerly comprising 61, 63 and 65, Brindley-st., for housing purposes.—£175 been approved and tenders to be obtained for external works at 30, Westbourne-sq. and 8, Warrington-crescent.

London (Woolwich).—B.C. approved: W. R. Herwin, 40, Artillery-place, Woolwich, on behalf of H. Gradidge & Son, Artillery-place, Woolwich, shop, offices and stores; F. C. W. Barrett, 3, New sq., Lincoln's Inn, W.C.2, on behalf of P. W. D. Mulgan, 81 to 91, Archery-rd., Eltham, 6 houses; W. R. Hindmarsh & Co., Tudor House, Eltham High-st., Eltham, Bercta-rd., Eltham, alteration and addition; W. E. Wright, 66, Eltham Hill, Eltham, Court-rd., Eltham, 4 houses; F. H. Jones, 102, Blanmerle-rd., Eltham, on behalf of C. T. Jones, Blanmerle-rd., Eltham, 6 bungalows; G. T. Scudamore, 170, Green-lane, Eltham, Green-lane, Eltham, drain 10 houses; J. Harrison & Co., Denmark-rd., Camberwell, S.E., Sidcup-rd., Eltham, sports pavilion; W. H. Godfrey, 18, Queen Anne's-gate, S.W.1, Back-lane, Eltham, 3 almshouses; J. Sutcliffe, Borough Engineer, Town Hall, W.B.C. housing estate, Eltham, 904 houses; S. W. Ackroyd, Commonwealth-buildings, Albion-rd., Woolwich, on behalf of R.A. Co-operative Society, Ltd., Commonwealth-way, Abbey Wood, 19 houses, with 2 garages; D. J. Moss, 11, Queen Victoria-st., E.C.4, on behalf of Float Iron Laundry, Ltd., Eltham High-st., mess room.

London (Woolwich).—B.C recommend application to M.H. for £1,750, for acquisition of portion of site of Well Hall House and grounds proposed to be used for library and museum. Plans passed: W. Harbrow, Ltd., 314, Rotherhithe New-rd., S.E.16, Footscray-rd., Eltham, Church Hall; A. Scott Mackintosh, King's Highway, Plumstead, on behalf of Mackintosh Bros., King's Highway, Plumstead, store in yard of mineral water factory.

Lowestoft.—T.C. approved: East Suffolk C.C., porter's lodge, Normanston Hospital; Eastern Amalgamated Theatres, Ltd., additions and alterations, The Marina Theatre.

Market Drayton.—U.D.C. appointed Messrs. Riley & Son, Central-chams., Wellington, to prepare lay-out scheme for houses on site in Salisbury-rd.

Newcastle-on-Tyne.—Business premises to be erected in Blenheim-st. to plans by J. R. & L. E. Hetherington, architects, County-chams., Westgate-st.—Extensions proposed to St. Gabriel's church. Plans by Hicks & Charlewood, A.A.R.I.B.A., architects, 4, Mosley-st.

New Ollerton.—Scheme been prepared for church, to be known as St. Paulinus. (Vicar, Rev. E. Dunnicliffe.)

Ormskirk.—Alterations, estimated to cost £1,500, to be carried out to "Railway Hotel," by Bent's Brewery Co., Ltd., Johnson-st., Liverpool. Plans by H. Davies & Son, Wellington-buildings, Liverpool.

Orpington.—P.C. approved: 8 pairs of houses and one detached house, Charterhouse-rd., J. Edmonds; 6 garages, Lovibond's-av., E. J. Moore; 4 pairs houses, Kingsway, A. Durling; 16 pairs houses, Bruce-grove, Smith & Stafford.

Orrell.—U.D.C. decided to make application for sanction of M.H. to 8 non-parlour houses, Moor-rd., and 4 parlour houses, Park-rd.—Plans passed:—W. A. Bywater, 8 semi-detached houses, Orrell-garden site.

Oxford.—Colcutt & Hamp, architects, 126, Wigmore-st., Portman-sq., London, W.1, prepared plans for extensions to Radcliffe Infirmary.

Portsmouth.—City Council to build a municipal aerodrome, at £50,000.

Reading.—Business premises in Friar-st. to plans prepared by G. Sainsbury, F.R.I.B.A., architect, 154, Friar-st.

Reigate.—T.C. approved extensions at Municipal Buildings. Architect, Hugh Macintosh.

Ripley.—U.D.C. acquired site in Outram-st. for public baths. G. W. Bird, surveyor, prepared plans.

Rochdale.—T.C. are considering sanatorium at Wolstenholme Hall.—Council to purchase 23 acres of land at Brimrod Farm estate for housing purposes.

Rothwell.—Central Miners' Welfare Committee promised £2,000 towards new public baths.

Rushden. — U.D.C. approved:—Additions to factory, Graveley-st., Austin & Co.; alterations, premises, High-st., Rushden & District Electric Supply Co., Ltd.

Sheffield.—Brightside & Carbrook Co-operative Society, Ltd., having plans prepared for branch premises.

Smethwick.—Corporation to enlarge conveniences in Brasshouse-lane and erection of houses for foremen on selected site.

Spondon.—Derbyshire E.C. propose elementary school in West-rd. George H. Widdows, County Architect, St. Mary's-gate, Derby.

Stafford.—General Committee of Infirmary instructed architect to prepare plans for out-patient and casualty department, at £5,000

St. Ives (Hunts).—P. V. Bernard, architect, 108, Jermyn-st., London, W., prepared plans for factory for Chicory, Ltd.

Stockton.—R.D.C. approved 6 semi-detached cottages in Croft-rd., Eaglescliffe, for W. Newby.

Stratford-on-Avon.—F. Walter Bagnall Yorke, architect, Church-st., prepared plans for business premises at Church-st., for E. Fox, printers, 19, Bridge-st.

Stretford.—U.D.C. resolved to consider scheme prepared by S. for conveniences, lodge and entrance gates at entrance to Longford-pk. at King's-rd. and Great Stone-rd

Sunderland.—Buildings Committee passed plans: 3 pairs semi-detached houses, Park-av., E. & J. Purvis, builders; sub-stations, Hendon-rd. and back Cleveland-rd., Corporation Electricity Supply.

Swansea.—C.B. approved: Electric sub-station, Swan-st., Electricity Committee; alterations and additions, 235-237, Oxford-st., Macowards, Ltd.; additions to visitors' shelter at General Hospital, for Hospital Committee; 6 houses, new road between Townhill-rd. and Graiglwyd-rd., for S. Thomas; 4 houses, Llwyn Arosfa, J. Williams; 6 houses, new road between Townhill-rd. and Graiglwyd-rd., F. G. Ace.—B. of E. approved final plans for proposed new school at Baptist Well, and Borough Architect been instructed to invite tenders.—B. of E. also approved preliminary plans for proposed new Gors school.—E.C. received Board's approval of plans and expenditure for proposed bakehouse and equipment at Technical College.—Borough Estate Agent reported that S. Jenkins, whom Corporation agreed to grant rebuilding lease of "Red Cow Inn," Carmarthen-rd., submitted plan.—Borough Estate Agent received application from Griffith Davies & Co., for a lease of land for 10 pairs of houses at Townhill.—Borough Architect submitted proposed lay-out for 200 non-parlour type houses on north-west section of Townhill site, and recommended that 100 be erected by direct administration and 100 by contract. This has been approved.

Thornton Cleveleys. — Lancashire Education Committee propose extensions to Thornton Council school in Beech-rd. by semi-permanent building, including heating apparatus. Plans by Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston.

Thornton Cleveleys.—Plans approved by Council:—39 houses and garages, Bedford and Cumberland-avs., S. Brookes.

Wakefield.—Scheme of extensions at Clayton Hospital to be shortly commenced. W. Harold Watson, architect, King-st.

Warrington.—T.C. propose senior Council school at Bewsey, for 480 boys and 480 girls. E.C. propose redecoration of Beaumont Council school, at £50, and Secondary school, at £470. A. M. Ker, B.C.

Weymouth.—Crickmay & Sons, architects and surveyors, 49, St. Mary-st., Weymouth, prepared plans for alterations and improvements at 5, Brunswick-ter.

Weymouth.—C. W. Pike, F.R.I.B.A., architect, Savernake House, Dorchester, prepared plans for isolation ward at Weymouth and District Hospital.

Wigan.—Board of Management, Royal Albert Edward Infirmary, to proceed with extensions and alterations nurses' home. Plans by T. Worthington & Sons, FF.R.I.B.A., 178, Oxford-rd., Manchester.

ESTIMATING ON RIGHT LINES

Everyone whose business it is to quote for building work should master the principles upon which estimating is based. These principles are clearly explained and illustrated in

'HOW TO ESTIMATE'

by J. T. REA,

an unique and invaluable work which is not excelled in thoroughness or in scope by any other book on the subject.

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B. T. BATSFORD, LTD.

Publishers, 94 High Holborn, London, W.C

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at			
King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster ...	2 14 3	Do. Bullnose ...	9 15 0
Do., Bullnose...	3 7 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—

2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretchers ...	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers...	26 10 0
		One Side and two Ends ...	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS

Delivered London

	s. d.		s. d.
2 in. per yd. super.	1 11	3 in per yd super	2 9
2½ in. „ „	2 4	4 in. „ „	3 6

	s. d.	
Thames Ballast	9 9	per yd
Pit Sand	12 0	„ „
Thames Sand	12 0	„ „
Best Washed Sand	12 6	„ „
¾ in. Shingle for Ferro-Concrete	11 6	„ „
½ in.	12 0	„ „
¾ in. Broken Brick	11 6	„ „
Pan Breeze	8 0	„ „

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British.

Standard Specification. Test £2 6 0 to £2 8 0 39s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0	7	6
Vitrocrete „ „	0	7	6
Super Cement (Waterproof)	3	16	0
Roman Cement	8	15	0
Parian Cement	5	15	0
Keene's Cement, White	5	15	0
„ „ Pink	5	10	0
Plaster, Coarse, Pink	3	0	0
„ „ White	3	12	6
„ Fine	5	12	0
Sirapite, Coarse	3	9	0
„ Finish	3	17	0
Grey Stone Lime	2	10	9
Chalk Lime	2	10	9
Best Ground Blue Lias Lime	1	17	6
Hair ..... per cwt.	2	2	6
Granite Chippings	1	12	0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—

Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft. cube	3 1½

Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road wagons at above stations, per ft. cube	4 5½

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—

	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire.	
Random blocks from 10 ft. and over P. ft. cb.	1 4 0
Sawn two sides ..... „	22 6
Sawn three or four sides ..... „	27 6

YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super	5 6
6 in. rubbed two sides, ditto ..... „	6 0
3 in. sawn two sides slabs (random sizes) „	2 3½
2 in. to 2½ in. sawn one side slabs random sizes) ..... „	1 6½
1½ in. to 2 in. ditto, ditto ..... „	1 3½

HARD YORK—

Delivered at any Goods Station, London.	
Scappled random blocks ..... Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super	5 1½
6 in. rubbed two sides, ditto ..... „	6 1½
4 in. sawn two sides slabs (random sizes) „	2 1½
3 in. ditto ditto „	2 10
2 in. self-faced random flags ..... Per yd. super	8

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£27 10	3 × 6	£21 0
4 × 9	26 0	3 × 11	25 0
4 × 8	25 0	2 × 11	26 0
4 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11	£30 0	1 × 9	£28 0

PLAIN EDGE FLOORING

Inches.	per sq.	Inches.	per sq.
⅝	18/-	1¼	30/-
¾	21/-	1½	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.	Inches.	per sq.
1	24/-	1½	34/-
1¼	30/-		

Ins. BATTENS	s. d.
⅝ × 2 ..... per 100 ft.	2 6

MATCHING (BEST).

Inches.	per sq.
⅝	16/6
¾	19/-
1	24/-

SAWN LATHS. s. d.

Per bundle 12 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 16 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12"	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	18 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£5 2 6
ditto hand-made ditto	5 7 6
Ornamental ditto	5 12 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
„ In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	⅞ in. to 2¾ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ¾ in. and under.	Fittings. Over ¾ in.	Flanges. ¾ in. and under.	Flanges. Over ¾ in.
	%	%	%	%	%	%
Gas	65	52½	45	47½	55	57½
Water	61½	48½	40	42½	50	52½
Steam	57½	45	35	37½	45	47½
Galv. gas	52½	40	35	37½	45	47½
Galv. water	47½	35	30	32½	40	42½
Galv. steam	42½	30	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock angles.	Branches, stock angles
2 in. plain	1/2½	9½d.	1/2
2½ in. „	1/3	10½d.	1/4½
3 in. „	1/6½	1/1½	1/8½
3½ in. „	1/11	1/4½	1/11½
4 in. „	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Bends, stock Pipe. angles.	Branches, stock angles.
	s. d.	s. d.
in. per yd. in 6 fts. plain	2 5	1 9
2½ in. „	2 9½	1 10½
3 in. „	3 0	2 1
3½ in. „	3 3	2 7
4 in. „	3 8	2 11

	s. d.	s. d.	s. d.
	2 1	2 7	3 7
	2 7	3 1½	4 1½

L.C.C. COATED DRAIN PIPES—London Prices ex Works Bends, stock Branches.

	Pipe. s. d.	Pipe, angles, stock angles. s. d.	s. d.
3 in. per yd in 9ft. lengths	3 6	4 6	7 0
4 in. „ „	4 8	5 5	9 3
5 in. „ „	6 3	9 6	15 0
6 in. „ „	7 3	11 6	19 0

Gasket for jointing 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	11 0 0	to	12 0 0
Staffordshire Crown Bars—Good merchant quality	11 10 0	to	12 10 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	9 10 0	...	10 10 0
Hoop iron, basis price	11 10 0	...	12 10 0
„ Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black—Ordinary sizes, to 20 g.	11 10 0	...	12 0 0
„ „ „ 24 g.	13 0 0	...	14 0 0
„ „ „ 26 g.	15 0 0	...	16 0 0
Sheets Flat Best Soft Steel, C.R. and C.A quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. by to 3 ft. to 26 g.	18 0 0	...	20 0 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	19 0 0	...	20 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0	...	22 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	23 0 0	...	25 0 0
Best Soft Steel Sheets, 26 g.	24 10 0	...	25 10 0
Cut Nail „ ½ in. to 6 in.	16 0 0	...	17 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete house, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)

	£ s. d.
LEAD—Sheet, English, 4 lb. and up	27 0 0
Pipe in coils	27 10 0
Soil pipe	30 10 0
Compo pipe	31 10 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton £16 10 0

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	1 3
Strong sheet	„	1 0
Thin	„	1 1
Copper nails	„	1 11
Copper wire	„	2 0

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 76/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in. ¾ in. 1 in. 1¼ in. 1½ in 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in. ¾ in. 1 in.
39/6 60/- 116/6 per doz.

CAPS AND SCREWS.

1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.

¾ in. 1 in. 1¼ in. 1½ in. 2 in.
7/6 11/- 17/- 29/- 36/- 63/- per doz.

BRASS SLEEVES.

1¼ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1¼ in. 1½ in. 2 in. 3 in.
8 lbs. P. traps ... 33/- 41/- 56/- 101/- per doz.
8 lbs. S. traps ... 35/- 45/- 66/- 126/- „

TIN.—English Ingots, 2/3 per lb. SOLDER.—Plumber's 9d., Tinmen's 11d, Blowpipe 1/- per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon	0	4 1
„ „ „ in barrels ...	„	0	4 3
„ „ „ in drums ...	„	0	4 5
Boiled „ „ in barrels ...	„	0	4 5
„ „ „ in drums ...	„	0	4 7
Turpentine in barrels	„	0	3 10
„ in drums (10 galls)	„	0	4 0
Genuine Ground English White Lead, per ton		51	0 0

(In not less than 5-cwt. casks.)

Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

PAINTS, &c. (*contd.*)

		£ s. d.
GENUINE WHITE LEAD PAINT. "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polseco," "J." Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots	per ton delivered...	70 10 0
Red Lead, Dry (packages extra) ...	per ton	30 0 0
Best Linseed Oil Putty	per cwt.	0 15 6
Fillcol	"	0 16 6
Size. XD quality	1kn.	0 3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ...	2½d.	32 oz. fourths	6½d.
15 „ thirds ...	3½d.	32 „ thirds	9d.
21 „ fourths ...	3½d.	Obscured Sheet, 15 oz....	3½d.
21 „ thirds ...	4½d.	„ „ 21 oz....	4½d.
26 „ fourths ...	4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d
26 „ thirds.....	6½d.	Km'lled, 15 oz. 4½d., 21 oz. 6d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate.....	4½d.
¼ Rough rolled	5½d.
Rough rolled.....	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White ...	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	6d.
Tinned do.....	7d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. £ s. d.
Clear sheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. not exceeding 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2 9

VARNISHES, &c.

		Per Gallon £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal.....	ditto	0 18 0
Pale Copal.....	ditto	1 0 0
Pale Opal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper.....	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting.....	ditto	1 0 6
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 12 0
Best ditto	ditto	1 2 6
Best Japan Gold Size.....		0 12 6
Best Black Japan		0 10 6
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebene.....		0 9 0
Cuirass Black Enamel.....		0 7 0

TRADE NEWS

A Ladder-making Business.

We are informed that Messrs. Cayless Bros. (Battersea) have taken over the old-established ladder-making business of Cayless Ladder Works, 306A, Fulham-road, S.W.10, and, after rebuilding, will use same as a depot for the sale and hire of all kinds of building plant. Order may be given on Kensington 3635 or Battersea 1741.

A Wallboard Company.

It will be of interest to members of the timber trade and to building merchants to learn that an associate company of the firm of Mo & Domsjö Aktiebolag was registered in London on June 23, under the name of the Mo & Domsjö Trading Co., Ltd. This company will manage the sales in Great Britain and Ireland of the Mo & Domsjö Wallboard Company's production of wallboard, which has been duly registered under the name of "Treetex." The board will have the following members:—Mr. Carl Kempe, Mr. Karl Salin, Mr. Ragnar Lagergren, Mr. Stephen W. Price, and Mr. A. Baldwin Raper, who will also be managing director of this company. Mr. Raper's present address is Imrie House, 33-36, King William-street, E.C.4, telephone No., Mansion House 9443.

NEW BUILDINGS IN SCOTLAND

Aberdeen. — CREMATORIUM. — The Public Health Committee of Aberdeen Town Council has recommended the Council to the establishment of a crematorium in or near the city.

Arbroath.—HOUSES.—Arbroath Town Council has instructed their Housing Committee to take in tenders for 50 three-apartment houses of the tenement type, to be erected on sites to be arranged.

Edinburgh.—BUILDINGS.—The Edinburgh Dean of Guild Court has granted the following:—Wesleyan Methodist Church, chapel and hall in London-road, Edinburgh; Church of the Good Shepherd, church hall at Murrayfield-avenue; J. Miller, 4 bungalows, Ulster-drive; City, Men's hostel at 2-14, Cowgate; T Usher and Son, Ltd., bottling warehouse and cooperage at Park Brewery, 106, St Leonard's-street.

Edinburgh.—SWIMMING POND.—The proposal to construct an open-air swimming pond has been further considered by a sub-committee of the General Purposes Committee of the Town Council, and it was remitted to the Burgh Engineer to proceed with preliminary plans and prepare an estimate of the cost. The Burgh Engineer is to prepare sketch plans for the proposed pond at Joppa.

Galashiels.—VARIOUS.—T.C. approved:—Messrs. Lipton Properties, Ltd., Lance-field-street, Glasgow, alterations on and additions, 50, 51 and 52, Bank-street; the Gala Bowling Club, addition to club-house in Scott-crescent; Messrs. James Beveridge, Ltd., provision merchants, Market-street, reconstruction, with alterations, buildings destroyed by fire in Green-street.

Greenock.—GARAGE.—The Greenock Corporation has decided to accept the offer of the Greenock Motor Services Co. for a piece of ground at the junction of Dellingham-street and Rue-end-street. The company are to build a new garage, offices, and waiting-rooms on the ground.

Moray.—ROADS. — Road-making schemes totalling £70,468 have been approved by Moray and Nairn Road Board.

Rothesay.—ROAD.—The Rothesay T.C. has approved of the construction of a road round the north end of the island of Bute at an estimated cost of £160,000.

Scottish Burgh Engineers' Conference.

The annual business meeting of the Scottish district of the Institute of Municipal and County Engineers was held in Inverness. Mr. Thomas Somers, City Engineer, Glasgow, vice-president, was in the chair, and the following were elected district officers for the year:—Scottish vice-president, Mr. Wm. Watson, burgh engineer, St. Andrews District; chairman, Mr. George S. Berry, county road surveyor, Ayr District; representative, Mr. Wm. A. Chapman, county road surveyor, Hamilton; honorary district secretary, Mr. Frank A. B. Preston, burgh engineer, Milngavie District; steward of widows' and orphans' fund, Mr. Wm. A. Macartney, city engineer, Edinburgh District; representative to widows' and orphans' fund, Mr. W. A. Chapman, Hamilton.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'†
Aberdeen	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayrshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Berwickshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/8	†1/2½
Broughty Ferry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Clackmannanshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/2½
Dumbartonshire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Dumfries	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dumfriesshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dundee	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Dunoon	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
East Lothian	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Edinburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Forfarshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Hamilton	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Inverurie	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kincardineshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kinross-shire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanarkshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Mid Lothian	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Motherwell	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Peeblesshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Perth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Perthshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Peterhead	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Renfrewshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rothesay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Roxburghshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Andrews	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Selkirkshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stirling	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stornoway	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Lothian	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wishaw	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 1238.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	„ „	1	0
Add for every additional depth of 6 ft.	„ „	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	„ „	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	„ „	7	0
Add if in floors 6 in. thick	„ „	3	3
Add if in beams	„ „	3	9
Add if aggregate 1 : 2 : 4	„ „	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	„ „	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	„	7	10	0
Add if in Staffordshire blues	„	22	0	0
Add if in Portland cement and sand	„	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	„	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	„ „	0	0	10
Axed in stocks	„ „	0	1	9
Rubbed and gauged jointed in putty camber or segmental	„ „	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	„ „	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	„	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	„ „	9	6
Three-quarter-inch on flats in two thicknesses	„ „	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	„ „	1	2

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	„ „	22	0
Bath stone and all labour fixed	„ „	10	6
Beer stone and all labour fixed	„ „	15	0
Portland stone fixed	„ „	20	0

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	„	80	9
Do. 24 in. × 12 in. Do. Do.	„	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0
Do. joists	„ „	5	6
Do. roofs, floors and partitions	„ „	6	0
Do. trusses	„ „	8	6

		¾″	1″	1¼″	2″
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

Flat centering for concrete floor, including struts or hangers	„	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	„	1	6
Gutter boards and bearers	„	1	0

FLOORING.

		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	„	—	49/-	57/6	65/-
Do. matchings	„	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	„ „	2	1
Add for fitting and fixing	„ „	0	3
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights : average size	„ „	3	9

DOORS.

		1½″	1¾″	2″
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	„	2/5	2/8	2/11
Two-panel moulded both sides	„	2/8	2/11	3/2
Four-panel Do. Do.	„	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	„	1/4	1/6	1/9
Add if cross-tongued	„	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	„ „	6	0
Add if ramped	„ „	12	0
Add if wreathed	„ „	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	„	19	0
Do. stanchions	„	21	9
In roofwork	„	27	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	„	1/9	2/-	2/6	3/3
Rain-water pipes with ears	„	1/9	2/7	—	-
Extra for shoes and bends	each	4/4	5/11	—	-
Do. stopped ends	„	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	„	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	44	0
Do. Do. in flats	„	43	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	„ „	1	3
Copper nailing	„ „	0	3

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	„	1/8	2/2	2/7	3/10	—	—
Do. soil	„	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	„	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	„	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	„	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	„	—	—	—	14/7	19/6	—
Bib cocks and joints	„	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	„	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	„ „	2	9
Do. Do. Keen's	„ „	4	0
Add saw lathing	„ „	1	7
Add metal lathing	„ „	2	6
(Not including hangers or runners, etc. for suspended ceilings.)			
Portland cement screed	„ „	2	2
Do. plain face	„ „	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	„ „	1	0
Obscured sheet	„ „	1	1
⅛-in. rolled plate	„ „	0	9
¼-in. rough rolled or cast plate	„ „	0	10½
¼-in. wired cast plate	„ „	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	„ „	0	7
Plain painting, 1 coat	„ „	0	9
Do. 2 coats	„ „	1	2
Do. 3 coats	„ „	1	9
Do. 4 coats	„ „	2	4
Graining	„ „	2	3
Varnishing twice	„ „	1	9
Sizing	„ „	0	3
Flatting	„ „	0	7
Enamel	„ „	1	1
Wax polishing	per foot sup.	0	6
French polishing	„ „	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Aberdeen.—Extension of the Commercial quay, for the Works Committee of the Aberdeen Harbour Board :—

‡Clark & Chapman, 49, Catherine-street, Aberdeen £15,269 15

Ashton-under-Lyne.—Bown house, West End recreation ground, for the T.C. Mr. J. Rowbottom, Borough Surveyor :—

*J. Ridyard & Sons, Ltd., Ashton-under-Lyne.

Barnsley.—Office block at the depot on Upper Sheffield-road, for the Yorkshire Traction Co., Ltd. Mr. N. A. Whitham, architect, Regent-street :—

*J. Richardson, Barnsley.

Barry.—Fifty houses on the Buttrills estate, for the Council :—

‡C. Brown, Cardiff.

Bath.—Erection of Combe Down sub-station, for the T.C. :—

*Williams & Son, Combe Down, Bath ... £460

Belfast.—Extensions to central laundry buildings at the Infirmary, for the B.G. Messrs. Young & MacKenzie, chartered architect. Mr. T. H. McMurray, 26, Cliftonville-avenue, and Mr. W. Pleasance, 44, Wellington-place, consultants. Quantities by Messrs. McCarthy & Liburn, Scottish Provident-buildings :—

*McAuley, McIlroy & Co., Ltd., Windsor, Building-works, 2, Windsor-road, Belfast.

Belfast.—Alterations to lavatory accommodation and alterations at main infirmary building, for the B.G. Messrs. Young & MacKenzie, chartered architects. Mr. T. H. McMurray, 26, Cliftonville-avenue, and Mr. W. Pleasance, 44, Wellington-place, consultants. Quantities by Messrs. McCarthy & Liburn, Scottish Provident-buildings :—

*McAuley, McIlroy & Co., Ltd., Windsor Building-works, 2, Windsor-road, Belfast.

Belfast.—Alterations at the convalescent department at the Infirmary, for B.G. Messrs. Young & MacKenzie, chartered architects. Mr. T. H. McMurray, 26, Cliftonville-avenue, and Mr. W. Pleasance, 44, Wellington-place, consultants. Quantities by Messrs. McCarthy & Liburn, Scottish Provident-buildings :—

*McAuley, McIlroy & Co., Ltd., Windsor Building-works, Windsor-road, Belfast.

Beverley.—24 non-parlour type houses on the Walker estate, for the T.C. Messrs. Whiteing & Reynolds, L.R.I.B.A., architects, 3, Ladygate :—

James Constable, Beverley	£10,005 0
A. R. Roberts, Beverley	9,177 18
J. W. Grainger, Beverley	9,153 0
F. J. Whiting, Cottingham	8,757 0
C. H. Smith, Hull	8,750 0
Holiday & Barker, Hull	8,712 0
C. & H. Lee, Hull	8,660 0
A. Stamp, Barton-on-Humber	8,564 0
Calvert & Spence, Beverley	8,594 12
R. Clumenshaw, Hull	8,429 0
Shields & Son, Hull	8,348 0
A. E. Jones, Hull	8,320 0
Reynard & Marsden, Hull	8,270 12
A. R. Stephenson, Dunswell	8,151 15
J. H. Fenwick, Ltd., Hull	7,757 10
Holmes & Haytor, Ltd., Hull	7,756 0
*Robinson & Saisden, Ltd., Hull	7,742 0

(Subject to approval of M.H.)

Birmingham.—Shopfront and interior fittings at 20d, Temple-street, for Messrs. P. H. Johnson, Ltd. :—

*A. Edmonds & Co., Ltd., Constitution-hill, Birmingham.

Birmingham.—Alterations and improvements to the premises of Messrs. Jay's Furnishing Stores, Bristol-street :—

*A. Hall & Son, North-street, Coventry.

Birmingham.—Retail shops with living accommodation on a site in Prince of Wales-lane. Messrs. Bright, Willis & Son, architects, 118, Colmore-row :—

*E. J. Vale, High-street, Warstock.

Birmingham.—Rebuilding the "Warstock Inn" public-house at Prince of Wales-lane and Yardley Wood-road, for Messrs. Ansell's Brewery, Ltd., of Aston :—

*Maddocks & Walford, Tyburn-road, Erdington, Birmingham.

Birmingham.—Alterations and improvements to the premises of the Educational Book Co., Corporation-street. Messrs. G. Lawton Brown & Percy Jones, architects and surveyors, 4, Market-place, Leicester :—

*Craftinwood, Ltd., 172, Ashted-road, Aston, Birmingham.

Birmingham.—Alterations at 199, Bristol-road. Messrs. Boomer & Gough, architects, 14, Temple-street :—

*Harris & Sons, Ltd., 152, Bristol-street, Birmingham.

Birmingham.—Extensions to the premises of Messrs. Coleman & Appleby, platers, Constitution-hill. Mr. Arthur McKewan, architect, Colmore-row :—

*W. & J. Webb, 257, Great King-street, Soho, Birmingham.

Blackpool.—Exterior painting of Messrs. Riley's premises in Corporation-street and Town Hall-street, for the C.B. :—

*Walmsley & Sons, 9, Birley-street, Blackpool.

Blackpool.—Extensions at the Palatine Central school, for the C.B. :—

*Herbert Joyce & Sons, Ltd., Blackpool.

Bourne.—Eight houses at Bourne and 4 at Dyke, for the U.D.C. Mr. J. S. Fisher, surveyor :—

*A. H. Scotney, Bourne £3,980

Bristol.—Public conveniences at Eastville-park, for the City Council :—

*R. Wilkins & Sons, Ltd. £1,939

Caherciveen.—Hot water supply at the District Hospital, for the Kerry Co. Board of Health :—

*D. Dennehy £102

Caterham.—36 houses in Stafford-road, for the U.D.C :—

*Humphries Hollom, Ltd., Wandsworth, S.W. £16,696

Chester.—Alterations to the electricity showrooms in Northgate-street, for the City Council. Mr. F. C. Saxon, A.R.I.B.A., architect, Cathedral-chambers, St. Werburgh-street :—

*W. Vernon & Son, Ltd., 57, Upper Northgate-street, Chester £3,980

Chesterfield.—Additions and alterations at (*a*) new Whittington infants' school, (*b*) central school, (*c*) Brushes school, Sheep Bridge, for the E.C. Messrs. Wilcockson & Cutts, architects, 12, Saltergate :—

(*a*) *G. Beresford Barlow, Chesterfield £1,338
(*b*) *D. Robson, Sheffield 1,696
(*c*) *C. E. Gaunt, Chesterfield 1,363

Chiswick.—Two conveniences, in Chiswick House Grounds, for the U.D.C. Mr. Edward Willis, engineer and surveyor :—

*A. J. Thair, 109, The Grove, Isleworth £2,482

Clitheroe.—School building at Chatburn-road Council school, for the T.C. Mr. A. R. Bleazard, Borough Engineer :—

Bricklayer—*J. Bleazard & Sons.
Carpenter—*T. H. Birtwell & Sons.
Slaters—*Pickle Bros., Leeds.
Plumber—*—, Whitewides.
Plastering—*E. Godley, Ltd., Rishton.
Painter—*W. Parkington.

(Rest of Clitheroe.)

Colwyn Bay.—Culvert, in Beach-road, Old Colwyn, for the U.D.C. Mr. W. J. Dunning, engineer and surveyor :—

W. Tarr & Co., Warrington	£909 0 0
Yorkshire Hennebique Contracting Co., Ltd., Leeds	861 15 3
*Reinforced Concrete Construction Co., Ltd., Elsinore-road, Old Trafford, Manchester	588 16 7

Conway.—Alterations to Municipal Offices, for the Council :—

*Ashworth Bros., Rhos-on-Sea £1,050

Coulsdon and Purley.—External painting to the houses on (*a*) Kenley and (*b*) Coulsdon No. 2 scheme :—

(*a*)—*H. Lawrence & Sons, Coulsdon £151 4 0
(*b*)—*H. Lawrence & Sons, Coulsdon £275 17 6

Coventry.—New ward block at the Convalescent Home, Allesley, for the Coventry and District Crippled Children's Guild, 55, Holyhead-road. Mr. S. J. Oldham, L.R.I.B.A., architect, Vine-chambers, High-street :—

*W. H. Jones & Sons, Ltd., Lockhurst-lane, Coventry.

Eastbourne.—Public shelter and convenience in Victoria-drive, for the T.C. Mr. L. Roseveare, Borough Engineer :—

*Peerless Dennis & Co., Ltd. £1,226 10

Eastbourne.—Alterations and additions, decorations, plumbing, electrical and hot water work at Chalk Farm, Willingdon, near Eastbourne :—

*Peerless Dennis & Co., Ltd. £1,483 5

Epsom.—Alterations and extensions at the Federation House, for the British Legion (West-street) Epsom Branch Club and Institute, Ltd. Messrs. A. C. Williams & Pettett, architects, Ashley-road :—

Everitts, Ltd., Croydon	£1,569 0
Fairweather & Co., London	1,491 0
Taylor & Son, Epsom	1,476 0
Thorogood Bros. & Son, Surbiton	1,465 0
Hickman's, Ltd., London	1,438 0
A. Searle, Ewell	1,391 10
Crosby & Co., Farnham	1,390 0
Tarrant, Ltd., Byfleet	1,350 0
*Skelton & Sons, Epsom	1,330 0

Escrick.—Alterations and additions to the police station, for the East Riding C.C. :—

*W. Birch & Sons, York.

Guildford.—Construction of grit chambers, sedimentation tanks, bacteria beds, humus tanks and other works, including manholes, pipe lines and alterations to existing tanks, for the T.C. Messrs. Dodd & Watson, engineers, Wellington House, Bennett's-hill, Birmingham :—

*Hussey Egan & Pickmere, Birmingham £41,599 15 6

Hayling.—Houses in Castleman's-lane, for the R.D.C. :—

Rogers Bros.	£2,952
Sharpe & Sons	2,922
Cortis & Hankins	2,886
Thomas Horner	2,783
French & West	2,770
Newell	2,682
*C. W. Paling (Portsmouth)	2,347

Headingley.—Electricity transformer sub-station at Moor-road, for the Leeds T.C. Mr. C. Nelson Hefford, engineer :—

*S. Flockton.

Heworth.—Additions to the church hall, Heworth-on-Tyne. Mr. R. Wylie, architect, 34, Grainger-street West, Newcastle :—

*T. A. Brown, Felling.

Heywood.—Concrete detritus tank at the Botany sewage disposal works, for the T.C. Messrs. J. Diggle & Sons, engineers :—

*J. Berry, Ltd., Heywood.

Leamington Spa.—Pavilion in the Victoria-park, for the T.C. :—

*W. Wood & Son, Ltd., Taplow £899 10

Leeds.—Reconstruction of offices and works in Claypit-lane, for Messrs. Gilchrist Bros., Ltd. :—

*Wm. Thompson & Sons.

Leeds.—Reconstruction of the "Sun Inn," Whitehall-road, for Messrs. Ind, Coope, Ltd., Burton. Messrs. A. & F. Mosley, Ltd., architects :—

Main Contract—*W. T. Pearson, Ltd.
Asphalters—*Tunstall's Rock Asphalte Co., Ltd.

Leeds.—Depot buildings opposite the "White Horse" Hotel, York-road, for Messrs. Smiths' Potato Crisps (1929), Ltd. :—

*P. Rhodes, Ltd.

Leeds.—Extensions to the workshops and offices at Sheepscar, for Messrs. Appleyard. Mr. W. F. Dawson, architect :—

*L. Harpham.

Leeds.—Cold Storage at the Gelderd-road abattoir, for the Leeds Industrial Co-operative Society, Ltd. :—

Cold Storage Work—*Gregson & Co., Ltd.
Rock Asphalte Work—*Tunstall's Rock Asphalte Co., Ltd.

Leicester.—Factory at Charles-street, for Messrs. Kendall & Co. Messrs. Brown & Jones, architects, 4, Market-place :—

*F. Elliott, Leicester.

London.—Internal and external decorations and repairs to the Carnegie Library House, Herne Hill, for the Lambeth B.C. Mr. Osmond Cattlin, Borough Surveyor:—

H. D. Harding, Ltd., S.W.9	£425	0	0
Lamerton & Norris, E. Dulwich	412	0	0
J. Appleby & Sons, Ltd., S.W.8	402	4	2
G. Brittain & Sons, Ltd., Kennington Road	384	10	0
E. Pollard & Co., Ltd., E.C.1	356	0	0
Stephenson (Decorators), W.C.	347	0	0
J. Darch, Ltd., E.C.4	325	0	0
White & Johnson, Chelsea	323	0	0
H. Lawrence & Sons, Coulsdon	286	0	0
G. W. Dorley-Brown, S.W.11	272	6	9
Sykes & Son, Ltd., Strand, W.C.2	259	15	0
Franks & Simons, Mile End	250	0	0
Robinson, Brixton Road	248	17	6
W. Bickerton, Brockley	223	15	0
Hawkins & Co., Norwood Road	200	0	0
‡Wm. Bugg & Son, S.E.27	175	0	0

London.—New sewer in Little Britain (from Aldersgate-street to West Smithfield), for the City Corporation:—

Howard Farrow, Ltd.	17,371	6	8
Daniel T. Jackson, Ltd.	16,047	1	8
H. E. West	15,823	7	0
D. R. Paterson, Ltd.	15,563	18	6
‡The City Construction Co.	14,336	5	1

London.—External painting and decoration required at the Artizans' Dwellings in Stoney-lane, for the City Corporation:—

G. T. Coote, Ltd.	£910	0	0
W. G. Beaumont & Son	835	1	0
W. H. Wagstaff & Son	758	0	0
F. J. Howard	736	7	0
‡Falkus Bros., Ltd.	678	0	0

London.—Repairs and painting work to the interior of 10 greenhouses, 2 pits and 36 frame lights, and repairs and decorations at the Lodge, Irish Corner, the Nonconformist Chapel and the superintendent's house and office in the Cemetery, East Finchley, for the Islington B.C.:—

Turner & Payne	£345	0	0
Honnor & Son	250	0	0
Stevens & Sons	247	0	0
W. G. Berry & Son	209	0	0
Scott & Son	176	12	6
*A. Ranson, 17, Church-lane, N.2	152	17	6

(All of London.)

London.—Conversion of Tate (South Lambeth) Library to the "open access" system, and for internal and external decorations and repairs, for the Lambeth B.C. Mr. Osmond Cattlin, Borough Surveyor:—

Lamerton & Norris, E. Dulwich	£1,473	0	0
H. D. Harding, Ltd., S.W.9	1,196	0	0
J. Appleby & Sons, Ltd., S.W.8	1,171	0	0
Robinson, S.W.9	998	0	0
E. Pollard & Co., Ltd., Clerkenwell	990	0	0
Sykes & Son, Ltd., Strand, W.C.2	937	16	0
G. W. Dorley-Brown, S.W.11	912	9	8
J. Crewdson, Horley	885	0	0
G. Brittain & Sons, Ltd., Kennington	840	0	0
White & Johnson, Chelsea	750	0	0
Hawkins & Co., Norwood	730	0	0
‡B. Newton & Sons, Rawdon, Leeds	630	0	0

London.—Repainting City Lands property, for the City Corporation:—

Nos. 18 to 30, Mount-street—			
Lister & Co. (Builders), Ltd.	£188	0	0
Cooke's (Finsbury), Ltd.	148	2	9
Ward, Saul & Co.	113	0	0
*Dearing & Co.	106	0	0
Nos 31, 32, 33 and 34, Mount-street, Nos. 86, 88 and 90, New-road, and Nos. 148, 150, 152 and 168, Whitechapel-road—			
Lister & Co. (Builders), Ltd.	158	0	0
Dearing & Co.	141	0	0
*Ward, Saul & Co.	121	0	0

London.—Wiring and fitting approximately (*a*) 131 flats at Derby-buildings, and (*b*) 40 flats belonging to the St. Pancras House Improvement Society, at Sidney-street, Somers Town, for the St. Pancras B.C.:—

	(*a*)			(*b*)		
W. G. Bailey, 43, Una House, N.W.5	£736	0		*£330	0	
City Electrical Co., Ltd.	630	0		394	0	
P. J. Driscoll & Co., Ltd.	564	10		414	10	
E. S. Russell & Co.	640	0		645	0	
W. Seymour & Co.	672	0		397	10	
Thos. H. Smerdon, 302 Kentish Town-road, N.W.5	*540	0		435	0	
H. J. Toms & Sons	594	2		491	2	
White, Bays & White	911	0		474	0	
J. A. Wigg & Co.	716	16		—		

(All of London.)

London.—Brick wall at the junction of Amhurst-road with Shacklewell-lane, for the Hackney B.C.:—

E. Setchell, London	£127	14	9
*W. M. Brand, 51, Oldhill-street, N.16	100	3	0

¶**London.**—H.M.O.W. accepted tenders for the week ending 21st inst.:—

Wood Green B.P.O.—alterations, etc.—Higgs & Hill, Ltd., Crown-works, South Lambeth-road, S.W.8.

Belfast Houses of Parliament—cooking apparatus—The Falkirk Iron Co., Ltd., 76, Wells-street, Oxford-street, W.1.

Whitehall T.E.—heating apparatus—J. Combe & Son, Ltd., Broadwater-road, Welwyn Garden City.

Belfast Law Courts—carving—James Walker, 151a, Oxford-street, W.1.

Newport E.E.—alterations, etc.—Knox & Wells, Ltd., Bangor-street, Cardiff.

Oldham T.E.—steel sashes—F. Braby & Co., Ltd., Petershill-road, Glasgow.

London.—Demolition works, etc., and reconstruction of wharf buildings and contingent works at the southern end of 26 Wharf, 175, Harrow-road, for the Paddington B.C.:—

*Ebenezer King, Ltd.	£1,991		

London.—Two sub-stations at Wendett-park and Wormholt-park, for the Hammersmith B.C.:—

A. E. Russell, Ltd.	£1,018		
G. W. Clarke	775		
A. Pascall & Son, Ltd.	775		
‡F. Coyle & Co., Ltd.	677		

London.—Alterations to, and redecoration of, the Library Hall, for the Stoke Newington B.C.:—

*Keilands, Ltd.	£496		

Ludlow.—22 non-parlour type houses, for the T.C. Mr. Wm. Geo. Lane, Borough Surveyor:—

Keely & Davies, Wigmore	£7,882		
W. A. Sherratt Church Stretton	7,216		
J. C. Vaughan & Son, Oswestry	6,842		
†J. C. Leech & Co., Ludlow	6,589		

Merthyr Tidfil.—Rebuilding of premises in High-street, for Messrs. J. Evans (Merthyr Tydvil), Ltd., 28, Thomas-street. Messrs. Johnson, Richards & Rees, L.R.I.B.A., architects, Glebeland House, 18, Glebeland-street:—

*G. W. Warlow, Warlow-street, Merthyr Tidfil.			

Navan.—Twelve houses, for the U.D.C.:—

McEnteggart, Nobber (£108 *extra if floors were tiled*)	£3,401	19	
Francis Delaney, Navan (*Extras to £3,962 8s.*)	3,822	0	
*P. O'Reilly, Moynalty (*Without tiled floors*, £3,448 19s. 6d.)	3,728	17	

Neath.—Additions at the works of the National Oil Refineries, Ltd., Burrows-road, Skewen. Mr. J. M. Wilson, architect, Windsor House, Victoria-street, London, S.W.1:—

*Waring, Cole & Waring, Queen-street, Neath.			

Newcastle.—223 houses on the St. Anthony's estate, for the City Council:—

‡Gustavus Bailey, Ltd., South Shields.			

Oldham.—Alterations and additions to the Bath Superintendent's house, Central Baths, Union-street, for the Corporation. Borough Engineer and Surveyor:—

*S. Ashton (Oldham), Ltd., Oldham.			

Pudsey.—56 houses, for the T.C. Mr. B. H. Noble, Borough Surveyor:—

*Wm. Thompson & Sons, Sheepscar-street, Leeds	£17,976		

Richmond (Surrey).—Painting and distempering at Corporation dwellings, for the T.C.:—

Decorations at dwellings, Manor-grove—			
*Tibbal & Son, Richmond	£451	6	
North Sheen—			
*W. J. Chaplin, Richmond	191	2	
Victoria-place—			
*H. M. Steel, Acton	38	5	
Selwyn estate—			
*W. J. & A. Long, Richmond	710	9	
Damp-proofing on Selwyn estate—			
*Speechley & Smith, Richmond	230	0	

Reading.—Reconstruction of the "Star Inn," Caversham, for Messrs. H. & G. Simonds, Ltd., brewers. Messrs. Charles Smith & Sons, architects, 164, Friar-street, Reading:—

*McCarthy Edward Fitt, 118, Oxford-road, Reading.			

Rufford.—Reconstruction of Spark Canal bridge, main ditch bridge, and necessary road works in Rufford, on the Rufford to Chorley road, for the Lancashire C.C. County Surveyor and Bridge-master, County Offices, Preston:—

*J. M. Firth & Sons, Todmorden.			

Rushden.—New cemetery fence at the rear of Winchester-road, for the U.D.C.:—

*A. Sanders, Coffee Tavern-lane, Rushden	£215		

Rushden.—Lavatories in Jubilee-park, for the U.D.C.:—

*W. Dickens, Wellingborough-road, Rushden	£143		

Sandy.—Twelve houses and ancillary work at West-road, for the U.D.C. Mr. F. C. Levitt, architect, Market-square, Biggleswade:—

*C. Hutchinson, Potton	£4,008		

Scarborough.—School, to be known as St. Margaret's. Mr. F. T. Rushton, architect, New Inn-square, London, W.C.1:—

*F. Shepherd & Son, Ltd., York	£50,000		

Solihull.—Additions to the Parish Church. Messrs. W. H. Bidlake & Knight, architects, Victoria-buildings, 5a, Temple-row, Birmingham:—

*J. Thompson & Sons, Peterborough	£12,762		

Southend-on-Sea.—Cleaning and painting at various Council schools, for the C.B. Mr. F. W. Smith, A.R.I.B.A., architect:—

Westboro' School, Centre and House, exterior; West Leigh School, interior—*Johns Bros., Ltd., North Woolwich.

Chalkwell School, exterior; School of Art, exterior—*H. Hughes, Stanley-road, Southend.

Hamstel School, interior—*Bell & Edmonds, 165, Hamlet Court-road, Westcliff.

Storrington.—Twelve council houses on the allotments at Cootham, for the Thakeham R.D.C.:—

*W. Dean & Sons	£4,490		

Surrey.—Improvements to Burford bridge, over the River Mole, on the London-Worthing main road, for the C.C. County Engineer, Kingston-upon-Thames:—

*G. Faulkner & Sons, Albert-road North, Reigate.			

Swansea.—66 houses at Town-hill, for the Corporation:—

*Samuel & Evans, Swansea.			

Swansea.—50 houses at Jersey Marine, for the Crymlyn Burrows Housing Society, Ltd.:—

*Samuel & Evans, Swansea.			

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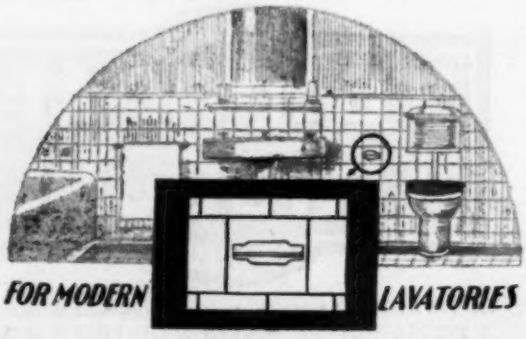

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*Griffith Davies & Co., Ltd., Swansea £2,200

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*J. Markham, 5, Cowley-road, Uxbridge £248 19

Warrington.—Butchery premises in Scott-street, for Co-operative Society, Ltd., Cairo-street:—

*Building Department, C.W.S., Ltd., Manchester.

Wednesbury.—New schools in Hobs Hole-road, Wood Green, for the T.C. Messrs. Joynson Bros., F.R.I.B.A., architects, Lower High-street. Quantities by Mr. C. W. D. Joynson, of Darlaston:—

C. Jackson (Tipton), Ltd., Tipton ...	£16,732
Richard Hammonds, Darlaston	15,380
W. Sharratt, Ltd., Wolverhampton ...	15,378
E. & W. Bennett, Ocker Hill, Tipton	14,998
T. Holloway, Ltd., Tipton	14,996
W. Willetts & Son, Kingswinford ...	14,790
T. W. Emery, Walsall	14,715
T. W. Edwards & Sons, Stourbridge	14,584
Housing, Ltd., Blackheath, Birmingham	14,362
Hammonds Bros., Darlaston	14,310
Elvins & Sons, Ltd., Birmingham ...	14,266
W. H. James & Son, Sutton Coldfield	14,100
Caddick, Son & Yates, Ltd., Wolverhampton	14,000
Summerhill & Jellyman, Wednesbury	13,965
J. & F. Wootton, Ltd., Bloxwich, Walsall	13,934
Green & Bird, Hednesford	13,897
W. Kendrick & Son, Ltd., Walsall	13,843
A. H. Guest, Ltd., Stourbridge ...	13,800
Bridgewater Bros., Ltd., Cradley Heath	13,680
T. Jones (Builders), Ltd., Wednesbury	13,526
Perks & Gould, Bilston	13,496
J. Dallow & Sons, Blackheath, Birmingham	13,480
A. S. C. Teece, Ltd., Wednesbury ...	13,428
*J. Emlyn Williams, Aston, Birmingham	13,113

Wrenthorpe.—Extensions to "The Wheel Inn," Bradford-road, for Messrs. Joshua Tetley & Sons, Ltd., The Brewery, Leeds. Messrs. Kitson, Parish, Ledgard & Pyman, architects, Vicar-lane, Leeds:—

*Furness & Render, Thornhill-street, Wakefield.

Wrexham.—118 houses on the Holt-road housing estate, for the T.C.:—

50 houses—

*E. Gittens, Alderwyn, near Johnstown	£16,144 0

68 houses—

W. Humphreys, Acrefair	23,183 16

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(*a*)—*Fleet & Roberts, Aylesbury £7,349

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